SEQUENCE LISTING

<110> Yale University
Carlson, John R.
Kim, Hunhyong
Clyne, Peter J.
Warr, Coral G.

<120> Novel Family of Odorant Receptor Genes in Drosophila

<130> 44574-5061-US

<140>
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<150> US 60/117,132
<151> 1999-01-25

<160> 112

<170> PatentIn Ver. 2.1

<210> 1
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<212> DNA
<213> Drosophila melanogaster

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<221> CDS
<222> (1)..(765)
<223> DOR 22A.2, coding region of NCBI Accession No. AF127924

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Met Leu Ser Gln Phe Phe Pro His Ile Lys Glu Lys Pro Leu Ser Glu
  1               5                  10                  15

cgg gtt aag tcc cga gat gcc ttc gtt tac tta gat cgg gtg atg tgg   96
Arg Val Lys Ser Arg Asp Ala Phe Val Tyr Leu Asp Arg Val Met Trp
             20                  25                  30

tcc ttt ggc tgg aca gtg cct gaa aac aaa agg tgg gat cta cat tac   144
Ser Phe Gly Trp Thr Val Pro Glu Asn Lys Arg Trp Asp Leu His Tyr
         35                  40                  45

aaa ctg tgg tca act ttc gtg aca ttg ttg ata ttt atc ctt ctg ccg   192
Lys Leu Trp Ser Thr Phe Val Thr Leu Leu Ile Phe Ile Leu Leu Pro
     50                  55                  60
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SEQUENCE LISTING

<110> Yale University
Carlson, John R.
Kim, Hunhyong
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<120> Novel Family of Odorant Receptor Genes in Drosophila

<130> 44574-5061-WO

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<151> 1999-01-25

<160> 112

<170> PatentIn Ver. 2.1

<210> 1
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<213> Drosophila melanogaster

<220>
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<223> DOR 22A.2, coding region of NCBI Accession No.
AF127924

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atg tta agc cag ttc ttt ccc cac att aaa gaa aag cca ttg agc gag   48
Met Leu Ser Gln Phe Phe Pro His Ile Lys Glu Lys Pro Leu Ser Glu
  1               5                  10                  15

cgg gtt aag tcc cga gat gcc ttc gtt tac tta gat cgg gtg atg tgg   96
Arg Val Lys Ser Arg Asp Ala Phe Val Tyr Leu Asp Arg Val Met Trp
             20                  25                  30

tcc ttt ggc tgg aca gtg cct gaa aac aaa agg tgg gat cta cat tac   144
Ser Phe Gly Trp Thr Val Pro Glu Asn Lys Arg Trp Asp Leu His Tyr
         35                  40                  45

aaa ctg tgg tca act ttc gtg aca ttg ttg ata ttt atc ctt ctg ccg   192
Lys Leu Trp Ser Thr Phe Val Thr Leu Leu Ile Phe Ile Leu Leu Pro
     50                  55                  60
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ata tcg gta agc gtt gag tat att cag cgg ttc aag acc ttc tcg gcg   240
Ile Ser Val Ser Val Glu Tyr Ile Gln Arg Phe Lys Thr Phe Ser Ala
 65                  70                  75                  80

ggt gag ttt ctt agc tca atc cag att ggc gtt aac atg tac gga agc   288
Gly Glu Phe Leu Ser Ser Ile Gln Ile Gly Val Asn Met Tyr Gly Ser
                 85                  90                  95

agc ttt aaa agt tat ttg acc atg atg gga tat aag aag aga cag gag   336
Ser Phe Lys Ser Tyr Leu Thr Met Met Gly Tyr Lys Lys Arg Gln Glu
            100                 105                 110

gct aag atg tca ctg gat gag ctg gac aag aga tgc gtt tgt gat gag   384
Ala Lys Met Ser Leu Asp Glu Leu Asp Lys Arg Cys Val Cys Asp Glu
        115                 120                 125

gag agg acc att gta cat cga cat gtc gcc ctg gga aac ttt tgc tat   432
Glu Arg Thr Ile Val His Arg His Val Ala Leu Gly Asn Phe Cys Tyr
    130                 135                 140

att ttc tat cac att gcg tac act agc ttt ttg att tca aac ttt ttg   480
Ile Phe Tyr His Ile Ala Tyr Thr Ser Phe Leu Ile Ser Asn Phe Leu
145                 150                 155                 160

tca ttt ata atg aag aga atc cat gcc tgg cgc atg tac ttt ccc tac   528
Ser Phe Ile Met Lys Arg Ile His Ala Trp Arg Met Tyr Phe Pro Tyr
                165                 170                 175

gtc gac ccc gaa aag caa ttt tac atc tct agc atc gcc gaa gtc att   576
Val Asp Pro Glu Lys Gln Phe Tyr Ile Ser Ser Ile Ala Glu Val Ile
            180                 185                 190

ctt agg gga tgg gcc gtc ttc atg gat ctc tgc acg gat gtg tgt cct   624
Leu Arg Gly Trp Ala Val Phe Met Asp Leu Cys Thr Asp Val Cys Pro
        195                 200                 205

ttg atc tcc atg gta ata gca cga tgc cac atc acc ctt ctg aaa cag   672
Leu Ile Ser Met Val Ile Ala Arg Cys His Ile Thr Leu Leu Lys Gln
    210                 215                 220

cgc ctg cga aat cta cga tcg gaa cca gga agg acg gaa gat gag tac   720
Arg Leu Arg Asn Leu Arg Ser Glu Pro Gly Arg Thr Glu Asp Glu Tyr
225                 230                 235                 240

ttg aag gag ctc gcc gac tgc gtt cga gat cac cgc ttg ata ttg ga    767
Leu Lys Glu Leu Ala Asp Cys Val Arg Asp His Arg Leu Ile Leu
                245                 250                 255
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<212> PRT
<213> Drosophila melanogaster

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20 25 30

Ser Phe Gly Trp Thr Val Pro Glu Asn Lys Arg Trp Asp Leu His Tyr
35 40 45

Lys Leu Trp Ser Thr Phe Val Thr Leu Leu Ile Phe Ile Leu Leu Pro
50 55 60

Ile Ser Val Ser Val Glu Tyr Ile Gln Arg Phe Lys Thr Phe Ser Ala
65 70 75 80

Gly Glu Phe Leu Ser Ser Ile Gln Ile Gly Val Asn Met Tyr Gly Ser
85 90 95

Ser Phe Lys Ser Tyr Leu Thr Met Met Gly Tyr Lys Lys Arg Gln Glu
100 105 110

Ala Lys Met Ser Leu Asp Glu Leu Asp Lys Arg Cys Val Cys Asp Glu
115 120 125

Glu Arg Thr Ile Val His Arg His Val Ala Leu Gly Asn Phe Cys Tyr
130 135 140

Ile Phe Tyr His Ile Ala Tyr Thr Ser Phe Leu Ile Ser Asn Phe Leu
145 150 155 160

Ser Phe Ile Met Lys Arg Ile His Ala Trp Arg Met Tyr Phe Pro Tyr
165 170 175

Val Asp Pro Glu Lys Gln Phe Tyr Ile Ser Ser Ile Ala Glu Val Ile
180 185 190

Leu Arg Gly Trp Ala Val Phe Met Asp Leu Cys Thr Asp Val Cys Pro
195 200 205

Leu Ile Ser Met Val Ile Ala Arg Cys His Ile Thr Leu Leu Lys Gln

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    210                 215                 220

Arg Leu Arg Asn Leu Arg Ser Glu Pro Gly Arg Thr Glu Asp Glu Tyr
225                 230                 235                 240

Leu Lys Glu Leu Ala Asp Cys Val Arg Asp His Arg Leu Ile Leu
                245                 250                 255
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<210> 3
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<212> DNA
<213> Drosophila melanogaster

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<222> (1)..(1137)
<223> DOR 22C.1, a coding segment on BDGP Clone No. AC004716

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Met Thr Asp Ser Gly Gln Pro Ala Ile Ala Asp His Phe Tyr Arg Ile
  1               5                  10                  15

ccc cgc atc tcc ggc ctc att gtc ggc ctc tgg ccg caa agg ata agg   96
Pro Arg Ile Ser Gly Leu Ile Val Gly Leu Trp Pro Gln Arg Ile Arg
             20                  25                  30

ggc ggg ggc ggt cgt cct tgg cac gcc cat ctg ctc ttc gtg ttc gcc   144
Gly Gly Gly Gly Arg Pro Trp His Ala His Leu Leu Phe Val Phe Ala
         35                  40                  45

ttc gcc atg gtg gtg gtg ggt gcg gtg ggc gag gtg tcg tac ggc tgt   192
Phe Ala Met Val Val Val Gly Ala Val Gly Glu Val Ser Tyr Gly Cys
     50                  55                  60

gtc cac ctg gac aac ctg gtg gtg gcg ctg gag gcc ttc tgc ccc gga   240
Val His Leu Asp Asn Leu Val Val Ala Leu Glu Ala Phe Cys Pro Gly
 65                  70                  75                  80

acc acc aag gcg gtc tgc gtt ttg aag ctg tgg gtc ttc ttc cgc tcc   288
Thr Thr Lys Ala Val Cys Val Leu Lys Leu Trp Val Phe Phe Arg Ser
                85                  90                  95

aat cgc cgg tgg gcg gag ttg gtc cag cgc ctg cgg gct att ttg ctc   336
Asn Arg Arg Trp Ala Glu Leu Val Gln Arg Leu Arg Ala Ile Leu Leu
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            100                 105                 110

agc ctg ttg ttg ctc agc tct ggc acg gcg aca aat gcc gcc ttc acc   384
Ser Leu Leu Leu Leu Ser Ser Gly Thr Ala Thr Asn Ala Ala Phe Thr
        115                 120                 125

ttg caa ccg ctg att atg ggt ctc tac cgc tgg att gtg cag ctg cca   432
Leu Gln Pro Leu Ile Met Gly Leu Tyr Arg Trp Ile Val Gln Leu Pro
    130                 135                 140

ggt caa acc gag ctg ccc ttt aat atc ata ctg ccc tcg ttt gcc gtg   480
Gly Gln Thr Glu Leu Pro Phe Asn Ile Ile Leu Pro Ser Phe Ala Val
145                 150                 155                 160

cag cca gga gtc ttt ccg ctc acc tac gtg ctg ctg acc gct tcc ggt   528
Gln Pro Gly Val Phe Pro Leu Thr Tyr Val Leu Leu Thr Ala Ser Gly
                165                 170                 175

gcc tgc acc gtt ttc gcc ttc agc ttc gtg gac gga ttc ttc att tgc   576
Ala Cys Thr Val Phe Ala Phe Ser Phe Val Asp Gly Phe Phe Ile Cys
            180                 185                 190

tcg tgc ctc tac atc tgc ggc gct ttc cgg ctg gtg cag cag gac att   624
Ser Cys Leu Tyr Ile Cys Gly Ala Phe Arg Leu Val Gln Gln Asp Ile
        195                 200                 205

cgc agg ata ttt gcc gat ttg cat ggc gtg gat gtg ttc acc gag gag   672
Arg Arg Ile Phe Ala Asp Leu His Gly Val Asp Val Phe Thr Glu Glu
    210                 215                 220

atg aac gcg gag gtg cgg cac aga ctg gcc caa gtt gtc gag cgg cac   720
Met Asn Ala Glu Val Arg His Arg Leu Ala Gln Val Val Glu Arg His
225                 230                 235                 240

aat gcg att atc gat ttc tgc acg gac cta aca cgc cag ttc acc gtt   768
Asn Ala Ile Ile Asp Phe Cys Thr Asp Leu Thr Arg Gln Phe Thr Val
                245                 250                 255

atc gtt tta atg cat ttc ctg tcc gcc gcc ttc gtc ctc tgc tcg acc   816
Ile Val Leu Met His Phe Leu Ser Ala Ala Phe Val Leu Cys Ser Thr
            260                 265                 270

atc ctg gac atc atg ttg aac acg tcg tcg ttg agc ggc tta acc tac   864
Ile Leu Asp Ile Met Leu Asn Thr Ser Ser Leu Ser Gly Leu Thr Tyr
        275                 280                 285

atc tgc tat atc atc gcg gcc cta acg cag cta ttc ctc tac tgc ttc   912
Ile Cys Tyr Ile Ile Ala Ala Leu Thr Gln Leu Phe Leu Tyr Cys Phe
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    290                 295                 300

gga ggc aat cac gtc agc gag agt agt gcg gct gtg gcg gac gtg ctg   960
Gly Gly Asn His Val Ser Glu Ser Ser Ala Ala Val Ala Asp Val Leu
305                 310                 315                 320

tac gac atg gag tgg tac aaa tgc gat gcg agg act agg aaa gtg att   1008
Tyr Asp Met Glu Trp Tyr Lys Cys Asp Ala Arg Thr Arg Lys Val Ile
                325                 330                 335

tta atg ata ttg cgc cgt tcg cag cgg gca aaa aca att gcg gtg ccg   1056
Leu Met Ile Leu Arg Arg Ser Gln Arg Ala Lys Thr Ile Ala Val Pro
            340                 345                 350

ttt ttt acg ccc tca ctg cca gca ctc cga tct ata ctc agc aca gcc   1104
Phe Phe Thr Pro Ser Leu Pro Ala Leu Arg Ser Ile Leu Ser Thr Ala
        355                 360                 365

ggc tca tat atc acg ctg cta aag acg ttc ctg taa                   1140
Gly Ser Tyr Ile Thr Leu Leu Lys Thr Phe Leu
    370                 375
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<210> 4
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<212> PRT
<213> Drosophila melanogaster

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             20                  25                  30

Gly Gly Gly Gly Arg Pro Trp His Ala His Leu Leu Phe Val Phe Ala
         35                  40                  45

Phe Ala Met Val Val Val Gly Ala Val Gly Glu Val Ser Tyr Gly Cys
     50                  55                  60

Val His Leu Asp Asn Leu Val Val Ala Leu Glu Ala Phe Cys Pro Gly
 65                  70                  75                  80

Thr Thr Lys Ala Val Cys Val Leu Lys Leu Trp Val Phe Phe Arg Ser
                 85                  90                  95

Asn Arg Arg Trp Ala Glu Leu Val Gln Arg Leu Arg Ala Ile Leu Leu
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           100                 105                 110

Ser Leu Leu Leu Leu Ser Ser Gly Thr Ala Thr Asn Ala Ala Phe Thr
        115                 120                 125

Leu Gln Pro Leu Ile Met Gly Leu Tyr Arg Trp Ile Val Gln Leu Pro
    130                 135                 140

Gly Gln Thr Glu Leu Pro Phe Asn Ile Ile Leu Pro Ser Phe Ala Val
145                 150                 155                 160

Gln Pro Gly Val Phe Pro Leu Thr Tyr Val Leu Leu Thr Ala Ser Gly
                165                 170                 175

Ala Cys Thr Val Phe Ala Phe Ser Phe Val Asp Gly Phe Phe Ile Cys
            180                 185                 190

Ser Cys Leu Tyr Ile Cys Gly Ala Phe Arg Leu Val Gln Gln Asp Ile
        195                 200                 205

Arg Arg Ile Phe Ala Asp Leu His Gly Val Asp Val Phe Thr Glu Glu
    210                 215                 220

Met Asn Ala Glu Val Arg His Arg Leu Ala Gln Val Val Glu Arg His
225                 230                 235                 240

Asn Ala Ile Ile Asp Phe Cys Thr Asp Leu Thr Arg Gln Phe Thr Val
                245                 250                 255

Ile Val Leu Met His Phe Leu Ser Ala Ala Phe Val Leu Cys Ser Thr
            260                 265                 270

Ile Leu Asp Ile Met Leu Asn Thr Ser Ser Leu Ser Gly Leu Thr Tyr
        275                 280                 285

Ile Cys Tyr Ile Ile Ala Ala Leu Thr Gln Leu Phe Leu Tyr Cys Phe
    290                 295                 300

Gly Gly Asn His Val Ser Glu Ser Ser Ala Ala Val Ala Asp Val Leu
305                 310                 315                 320

Tyr Asp Met Glu Trp Tyr Lys Cys Asp Ala Arg Thr Arg Lys Val Ile
                325                 330                 335

Leu Met Ile Leu Arg Arg Ser Gln Arg Ala Lys Thr Ile Ala Val Pro
            340                 345                 350

Phe Phe Thr Pro Ser Leu Pro Ala Leu Arg Ser Ile Leu Ser Thr Ala
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        355                 360                 365

Gly Ser Tyr Ile Thr Leu Leu Lys Thr Phe Leu
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<213> Drosophila melanogaster

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<223> DOR23A.1, coding region of AF127925

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Met Lys Leu Ser Glu Thr Leu Lys Ile Asp Tyr Phe Arg Val Gln Leu
  1               5                  10                  15

aat gcc tgg cga att tgt ggt gcc ttg gat ctc agc gag ggt agg tac   96
Asn Ala Trp Arg Ile Cys Gly Ala Leu Asp Leu Ser Glu Gly Arg Tyr
             20                  25                  30

tgg agt tgg tcg atg cta ttg tgc atc ttg gtg tac ctg ccg aca ccc   144
Trp Ser Trp Ser Met Leu Leu Cys Ile Leu Val Tyr Leu Pro Thr Pro
         35                  40                  45

atg cta ctg aga gga gta tac agt ttc gaa gat ccg gtg gaa aat aat   192
Met Leu Leu Arg Gly Val Tyr Ser Phe Glu Asp Pro Val Glu Asn Asn
     50                  55                  60

ttc agc ttg agc ctg acg gtc act tcg ctg tcc aat ctc atg aag ttc   240
Phe Ser Leu Ser Leu Thr Val Thr Ser Leu Ser Asn Leu Met Lys Phe
 65                  70                  75                  80

tgc atg tac gtg gcc caa cta aca aag atg gtc gag gtc cag agt ctt   288
Cys Met Tyr Val Ala Gln Leu Thr Lys Met Val Glu Val Gln Ser Leu
                 85                  90                  95

att ggt cag ctg gat gcc cgg gtt tct ggc gag agc cag tct gag cgt   336
Ile Gly Gln Leu Asp Ala Arg Val Ser Gly Glu Ser Gln Ser Glu Arg
            100                 105                 110

cat aga aat atg acc gag cac ctg cta agg atg tcc aag ctg ttc cag   384
His Arg Asn Met Thr Glu His Leu Leu Arg Met Ser Lys Leu Phe Gln
```

```
        115                 120                 125

atc acc tac gct gta gtc ttc atc att gct gca gtt ccc ttc gtt ttc   432
Ile Thr Tyr Ala Val Val Phe Ile Ile Ala Ala Val Pro Phe Val Phe
    130                 135                 140

gaa act gag cta agc tta ccc atg ccc atg tgg ttt ccc ttc gac tgg   480
Glu Thr Glu Leu Ser Leu Pro Met Pro Met Trp Phe Pro Phe Asp Trp
145                 150                 155                 160

aag aac tcg atg gtg gcc tac atc gga gct ctg gtt ttc cag gag att   528
Lys Asn Ser Met Val Ala Tyr Ile Gly Ala Leu Val Phe Gln Glu Ile
                165                 170                 175

ggc tat gtc ttt caa att atg caa tgc ttt gca gct gac tcg ttt ccc   576
Gly Tyr Val Phe Gln Ile Met Gln Cys Phe Ala Ala Asp Ser Phe Pro
            180                 185                 190

ccg ctc gta ctg tac ctg atc tcc gag caa tgt caa ttg ctg atc ctg   624
Pro Leu Val Leu Tyr Leu Ile Ser Glu Gln Cys Gln Leu Leu Ile Leu
        195                 200                 205

aga atc tct gaa atc gga tat ggt tac aag act ctg gag gag aac gaa   672
Arg Ile Ser Glu Ile Gly Tyr Gly Tyr Lys Thr Leu Glu Glu Asn Glu
    210                 215                 220

cag gat ctg gtc aac tgc atc agg gat caa aac gcg ctg tat aga tta   720
Gln Asp Leu Val Asn Cys Ile Arg Asp Gln Asn Ala Leu Tyr Arg Leu
225                 230                 235                 240

ctc gat gtg acc aag agt ctc gtt tcg tat ccc atg atg gtg cag ttt   768
Leu Asp Val Thr Lys Ser Leu Val Ser Tyr Pro Met Met Val Gln Phe
                245                 250                 255

atg gtt att ggc atc aac atc gcc atc acc cta ttt gtc ctg ata ttt   816
Met Val Ile Gly Ile Asn Ile Ala Ile Thr Leu Phe Val Leu Ile Phe
            260                 265                 270

tac gtg gag acc ttg tac gat cgc atc tat tat ctt tgc ttt ctc ttg   864
Tyr Val Glu Thr Leu Tyr Asp Arg Ile Tyr Tyr Leu Cys Phe Leu Leu
        275                 280                 285

ggc atc acc gtg cag aca tat cca ttg tgc tac tat gga acc atg gtg   912
Gly Ile Thr Val Gln Thr Tyr Pro Leu Cys Tyr Tyr Gly Thr Met Val
    290                 295                 300

cag gag agt ttt gct gag ctt cac tat gcg gta ttc tgc agc aac tgg   960
Gln Glu Ser Phe Ala Glu Leu His Tyr Ala Val Phe Cys Ser Asn Trp
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```
305                 310                 315                 320

gtg gat caa agt gcc agc tat cgt ggg cac atg ctc atc ctg gcg gag   1008
Val Asp Gln Ser Ala Ser Tyr Arg Gly His Met Leu Ile Leu Ala Glu
                325                 330                 335

cgc act aag cgg atg cag ctt ctc ctc gcc ggc aac ctg gtg ccc atc   1056
Arg Thr Lys Arg Met Gln Leu Leu Leu Ala Gly Asn Leu Val Pro Ile
            340                 345                 350

cac ctg agc acc tac gtg gcc tgt tgg aag gga gcc tac tcc ttc ttc   1104
His Leu Ser Thr Tyr Val Ala Cys Trp Lys Gly Ala Tyr Ser Phe Phe
        355                 360                 365

acc ctg atg gcc gat cga gat ggc ctg ggt tct tag                   1140
Thr Leu Met Ala Asp Arg Asp Gly Leu Gly Ser
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<210> 6
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<212> PRT
<213> Drosophila melanogaster

<400> 6

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Asn Ala Trp Arg Ile Cys Gly Ala Leu Asp Leu Ser Glu Gly Arg Tyr
             20                  25                  30

Trp Ser Trp Ser Met Leu Leu Cys Ile Leu Val Tyr Leu Pro Thr Pro
         35                  40                  45

Met Leu Leu Arg Gly Val Tyr Ser Phe Glu Asp Pro Val Glu Asn Asn
     50                  55                  60

Phe Ser Leu Ser Leu Thr Val Thr Ser Leu Ser Asn Leu Met Lys Phe
 65                  70                  75                  80

Cys Met Tyr Val Ala Gln Leu Thr Lys Met Val Glu Val Gln Ser Leu
                 85                  90                  95

Ile Gly Gln Leu Asp Ala Arg Val Ser Gly Glu Ser Gln Ser Glu Arg
            100                 105                 110

His Arg Asn Met Thr Glu His Leu Leu Arg Met Ser Lys Leu Phe Gln
        115                 120                 125
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Ile Thr Tyr Ala Val Val Phe Ile Ile Ala Ala Val Pro Phe Val Phe
    130                 135                 140

Glu Thr Glu Leu Ser Leu Pro Met Pro Met Trp Phe Pro Phe Asp Trp
145                 150                 155                 160

Lys Asn Ser Met Val Ala Tyr Ile Gly Ala Leu Val Phe Gln Glu Ile
                165                 170                 175

Gly Tyr Val Phe Gln Ile Met Gln Cys Phe Ala Ala Asp Ser Phe Pro
            180                 185                 190

Pro Leu Val Leu Tyr Leu Ile Ser Glu Gln Cys Gln Leu Leu Ile Leu
        195                 200                 205

Arg Ile Ser Glu Ile Gly Tyr Gly Tyr Lys Thr Leu Glu Glu Asn Glu
    210                 215                 220

Gln Asp Leu Val Asn Cys Ile Arg Asp Gln Asn Ala Leu Tyr Arg Leu
225                 230                 235                 240

Leu Asp Val Thr Lys Ser Leu Val Ser Tyr Pro Met Met Val Gln Phe
                245                 250                 255

Met Val Ile Gly Ile Asn Ile Ala Ile Thr Leu Phe Val Leu Ile Phe
            260                 265                 270

Tyr Val Glu Thr Leu Tyr Asp Arg Ile Tyr Tyr Leu Cys Phe Leu Leu
        275                 280                 285

Gly Ile Thr Val Gln Thr Tyr Pro Leu Cys Tyr Tyr Gly Thr Met Val
    290                 295                 300

Gln Glu Ser Phe Ala Glu Leu His Tyr Ala Val Phe Cys Ser Asn Trp
305                 310                 315                 320

Val Asp Gln Ser Ala Ser Tyr Arg Gly His Met Leu Ile Leu Ala Glu
                325                 330                 335

Arg Thr Lys Arg Met Gln Leu Leu Leu Ala Gly Asn Leu Val Pro Ile
            340                 345                 350

His Leu Ser Thr Tyr Val Ala Cys Trp Lys Gly Ala Tyr Ser Phe Phe
        355                 360                 365

Thr Leu Met Ala Asp Arg Asp Gly Leu Gly Ser
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<210> 7
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<212> DNA
<213> Drosophila melanogaster

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<223> DOR 24D.1, a coding region on BDGP Clone No.
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ttc atg gtg cca aag ttt gca tta tcg ctg att ggt ttt tat ccc gaa 96
Phe Met Val Pro Lys Phe Ala Leu Ser Leu Ile Gly Phe Tyr Pro Glu
20 25 30

cag aag cga acg gtt ttg gtg aaa ctt tgg agt ttc ttc aac ttt ttc 144
Gln Lys Arg Thr Val Leu Val Lys Leu Trp Ser Phe Phe Asn Phe Phe
35 40 45

atc ctc acc tac ggc tgt tat gca gag gct tac tat ggc ata cac tat 192
Ile Leu Thr Tyr Gly Cys Tyr Ala Glu Ala Tyr Tyr Gly Ile His Tyr
50 55 60

ata ccg att aac ata gcc act gca ttg gat gcc ctt tgt cct gtg gcc 240
Ile Pro Ile Asn Ile Ala Thr Ala Leu Asp Ala Leu Cys Pro Val Ala
65 70 75 80

tcc agc att ttg tcg ctg gtg aaa atg gtc gcc att tgg tgg tat caa 288
Ser Ser Ile Leu Ser Leu Val Lys Met Val Ala Ile Trp Trp Tyr Gln
85 90 95

gat gaa tta agg agt ttg ata gag cgg agg ttc tat aca ctg gca acg 336
Asp Glu Leu Arg Ser Leu Ile Glu Arg Arg Phe Tyr Thr Leu Ala Thr
100 105 110

caa cta aca ttc ctg cta cta tgc tgt gga ttt tgc acc agt act tcc 384
Gln Leu Thr Phe Leu Leu Leu Cys Cys Gly Phe Cys Thr Ser Thr Ser
115 120 125

tat tcc gtc aga cat ttg att gat aat atc ctg aga cgc acc cat ggc 432

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Tyr Ser Val Arg His Leu Ile Asp Asn Ile Leu Arg Arg Thr His Gly
    130                 135                 140

aag gac tgg atc tac gag act ccg ttc aag atg atg ttc ccc gat ctt   480
Lys Asp Trp Ile Tyr Glu Thr Pro Phe Lys Met Met Phe Pro Asp Leu
145                 150                 155                 160

ctc ctg cgt ttg cca ctc tat ccc atc acc tat ata ctc gtg cat tgg   528
Leu Leu Arg Leu Pro Leu Tyr Pro Ile Thr Tyr Ile Leu Val His Trp
                165                 170                 175

cat ggc tac att act gtg gtt tgt ttt gtc ggc gcg gat ggt ttc ttc   576
His Gly Tyr Ile Thr Val Val Cys Phe Val Gly Ala Asp Gly Phe Phe
            180                 185                 190

ctg ggg ttc tgt ttg tac ttc act gtt ttg ctg ctc tgt ctg cag gac   624
Leu Gly Phe Cys Leu Tyr Phe Thr Val Leu Leu Leu Cys Leu Gln Asp
        195                 200                 205

gat gtt tgt gat tta cta gag gtt gaa aac atc gag aag agt ccc tcc   672
Asp Val Cys Asp Leu Leu Glu Val Glu Asn Ile Glu Lys Ser Pro Ser
    210                 215                 220

gaa gcg gag gaa gct cgc ata gtt cgg gaa atg gaa aaa ctg gtg gac   720
Glu Ala Glu Glu Ala Arg Ile Val Arg Glu Met Glu Lys Leu Val Asp
225                 230                 235                 240

cgg cat aac gag gtg gcc gag ctg aca gaa aga ttg tcg ggt gtt atg   768
Arg His Asn Glu Val Ala Glu Leu Thr Glu Arg Leu Ser Gly Val Met
                245                 250                 255

gtg gaa ata aca ctg gcc cac ttt gtt act tcg agt ttg ata atc gga   816
Val Glu Ile Thr Leu Ala His Phe Val Thr Ser Ser Leu Ile Ile Gly
            260                 265                 270

acc agc gtg gtg gat att tta tta ttt tcc ggc ctg gga atc att gtg   864
Thr Ser Val Val Asp Ile Leu Leu Phe Ser Gly Leu Gly Ile Ile Val
        275                 280                 285

tat gtg gtc tac act tgt gcc gta ggt gtg gaa ata ttt cta tac tgt   912
Tyr Val Val Tyr Thr Cys Ala Val Gly Val Glu Ile Phe Leu Tyr Cys
    290                 295                 300

tta gga gga tct cat att atg gaa gcg tgt tcc aat cta gcg cgc tcc   960
Leu Gly Gly Ser His Ile Met Glu Ala Cys Ser Asn Leu Ala Arg Ser
305                 310                 315                 320

aca ttt tcc agc cac tgg tat ggc cac agt gtt cgg gtc caa aag atg   1008
```

```
Thr Phe Ser Ser His Trp Tyr Gly His Ser Val Arg Val Gln Lys Met
                325                 330                 335

acc ctt ttg atg gta gct cgt gct caa cga gtt ctc aca att aaa att   1056
Thr Leu Leu Met Val Ala Arg Ala Gln Arg Val Leu Thr Ile Lys Ile
            340                 345                 350

cct ttc ttt tcc cca tca tta gag act cta act tcg att ttg cgc ttc   1104
Pro Phe Phe Ser Pro Ser Leu Glu Thr Leu Thr Ser Ile Leu Arg Phe
        355                 360                 365

act gga tct ctg att gcc ctg gca aag tcg gtt ata taa               1143
Thr Gly Ser Leu Ile Ala Leu Ala Lys Ser Val Ile
    370                 375                 380
```

<210> 8
<211> 380
<212> PRT
<213> Drosophila melanogaster

<400> 8

```
Met Leu Pro Arg Phe Leu Thr Ala Ser Tyr Pro Met Glu Arg His Tyr
  1               5                  10                  15

Phe Met Val Pro Lys Phe Ala Leu Ser Leu Ile Gly Phe Tyr Pro Glu
             20                  25                  30

Gln Lys Arg Thr Val Leu Val Lys Leu Trp Ser Phe Phe Asn Phe Phe
         35                  40                  45

Ile Leu Thr Tyr Gly Cys Tyr Ala Glu Ala Tyr Tyr Gly Ile His Tyr
     50                  55                  60

Ile Pro Ile Asn Ile Ala Thr Ala Leu Asp Ala Leu Cys Pro Val Ala
 65                  70                  75                  80

Ser Ser Ile Leu Ser Leu Val Lys Met Val Ala Ile Trp Trp Tyr Gln
                 85                  90                  95

Asp Glu Leu Arg Ser Leu Ile Glu Arg Arg Phe Tyr Thr Leu Ala Thr
            100                 105                 110

Gln Leu Thr Phe Leu Leu Leu Cys Cys Gly Phe Cys Thr Ser Thr Ser
        115                 120                 125

Tyr Ser Val Arg His Leu Ile Asp Asn Ile Leu Arg Arg Thr His Gly
    130                 135                 140
```

```
Lys Asp Trp Ile Tyr Glu Thr Pro Phe Lys Met Met Phe Pro Asp Leu
145                 150                 155                 160

Leu Leu Arg Leu Pro Leu Tyr Pro Ile Thr Tyr Ile Leu Val His Trp
                165                 170                 175

His Gly Tyr Ile Thr Val Val Cys Phe Val Gly Ala Asp Gly Phe Phe
            180                 185                 190

Leu Gly Phe Cys Leu Tyr Phe Thr Val Leu Leu Leu Cys Leu Gln Asp
        195                 200                 205

Asp Val Cys Asp Leu Leu Glu Val Glu Asn Ile Glu Lys Ser Pro Ser
    210                 215                 220

Glu Ala Glu Glu Ala Arg Ile Val Arg Glu Met Glu Lys Leu Val Asp
225                 230                 235                 240

Arg His Asn Glu Val Ala Glu Leu Thr Glu Arg Leu Ser Gly Val Met
                245                 250                 255

Val Glu Ile Thr Leu Ala His Phe Val Thr Ser Ser Leu Ile Ile Gly
            260                 265                 270

Thr Ser Val Val Asp Ile Leu Leu Phe Ser Gly Leu Gly Ile Ile Val
        275                 280                 285

Tyr Val Val Tyr Thr Cys Ala Val Gly Val Glu Ile Phe Leu Tyr Cys
    290                 295                 300

Leu Gly Gly Ser His Ile Met Glu Ala Cys Ser Asn Leu Ala Arg Ser
305                 310                 315                 320

Thr Phe Ser Ser His Trp Tyr Gly His Ser Val Arg Val Gln Lys Met
                325                 330                 335

Thr Leu Leu Met Val Ala Arg Ala Gln Arg Val Leu Thr Ile Lys Ile
            340                 345                 350

Pro Phe Phe Ser Pro Ser Leu Glu Thr Leu Thr Ser Ile Leu Arg Phe
        355                 360                 365

Thr Gly Ser Leu Ile Ala Leu Ala Lys Ser Val Ile
    370                 375                 380
```

<210> 9
<211> 1212
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1209)

<400> 9
```
atg ttc gga cac ttt aag ctc gtc tat ccg gct cct ata tcg gag ccc   48
Met Phe Gly His Phe Lys Leu Val Tyr Pro Ala Pro Ile Ser Glu Pro
  1               5                  10                  15

ata cag tct agg gat tcg aat gca tac atg atg gag acg ctg cga aat   96
Ile Gln Ser Arg Asp Ser Asn Ala Tyr Met Met Glu Thr Leu Arg Asn
             20                  25                  30

tcg ggc ttg aat ttg aag aac gat ttc ggt ata ggc cgc aag att tgg   144
Ser Gly Leu Asn Leu Lys Asn Asp Phe Gly Ile Gly Arg Lys Ile Trp
         35                  40                  45

agg gtg ttt tcg ttc acc tac aat atg gtg ata ctt ccc gta agt ttc   192
Arg Val Phe Ser Phe Thr Tyr Asn Met Val Ile Leu Pro Val Ser Phe
     50                  55                  60

cca atc aac tat gtg ata cat ctg gcg gag ttc ccg ccg gag ctg ctg   240
Pro Ile Asn Tyr Val Ile His Leu Ala Glu Phe Pro Pro Glu Leu Leu
 65                  70                  75                  80

ctg caa tcc ctg caa ctg tgc ctc aac act tgg tgc ttc gct ctg aag   288
Leu Gln Ser Leu Gln Leu Cys Leu Asn Thr Trp Cys Phe Ala Leu Lys
                85                  90                  95

ttc ttc act ctg atc gtc tat acg cac cgc ttg gag ctg gcc aac aag   336
Phe Phe Thr Leu Ile Val Tyr Thr His Arg Leu Glu Leu Ala Asn Lys
            100                 105                 110

cac ttt gac gaa ttg gat aag tac tgc gtg aag ccg gcg gag aag cgc   384
His Phe Asp Glu Leu Asp Lys Tyr Cys Val Lys Pro Ala Glu Lys Arg
        115                 120                 125

aag gtt cgc gac atg gtg gcc act att aca aga ctg tac ctg acc ttc   432
Lys Val Arg Asp Met Val Ala Thr Ile Thr Arg Leu Tyr Leu Thr Phe
    130                 135                 140

gtc gtg gtc tac gtc ctc tac gcc acc tcc acg cta ctg gac gga cta   480
Val Val Val Tyr Val Leu Tyr Ala Thr Ser Thr Leu Leu Asp Gly Leu
```

```
145                 150                 155                 160

ctg cac cac cgt gtt ccc tac aat acg tac tat ccg ttc ata aac tgg   528
Leu His His Arg Val Pro Tyr Asn Thr Tyr Tyr Pro Phe Ile Asn Trp
                165                 170                 175

cga gtc gat cgg acc cag atg tac atc cag agt ttt ctg gag tac ttc   576
Arg Val Asp Arg Thr Gln Met Tyr Ile Gln Ser Phe Leu Glu Tyr Phe
            180                 185                 190

acc gtg ggt tat gcc ata tat gtg gcc acc gcc acc gat tcc tac cct   624
Thr Val Gly Tyr Ala Ile Tyr Val Ala Thr Ala Thr Asp Ser Tyr Pro
        195                 200                 205

gtg att tac gtg gca gcc ctg cga act cat att ctc ttg ctc aag gac   672
Val Ile Tyr Val Ala Ala Leu Arg Thr His Ile Leu Leu Leu Lys Asp
    210                 215                 220

cgt atc att tac ttg ggc gat ccc agc aac gag ggt agc agc gac ccg   720
Arg Ile Ile Tyr Leu Gly Asp Pro Ser Asn Glu Gly Ser Ser Asp Pro
225                 230                 235                 240

agc tac atg ttt aaa tcg ttg gtg gat tgt atc aag gca cac aga acc   768
Ser Tyr Met Phe Lys Ser Leu Val Asp Cys Ile Lys Ala His Arg Thr
                245                 250                 255

atg cta aat ttt tgt gat gcc att caa cca atc atc tct ggc acg ata   816
Met Leu Asn Phe Cys Asp Ala Ile Gln Pro Ile Ile Ser Gly Thr Ile
            260                 265                 270

ttt gcc caa ttc atc ata tgc gga tcg atc ctg ggc ata att atg atc   864
Phe Ala Gln Phe Ile Ile Cys Gly Ser Ile Leu Gly Ile Ile Met Ile
        275                 280                 285

aac atg gta ttg ttc gct gat caa tcg acc cga ttc ggc ata gtc atc   912
Asn Met Val Leu Phe Ala Asp Gln Ser Thr Arg Phe Gly Ile Val Ile
    290                 295                 300

tac gtt atg gcc gtc ctt ctg cag act ttt ccg ctt tgc ttc tac tgc   960
Tyr Val Met Ala Val Leu Leu Gln Thr Phe Pro Leu Cys Phe Tyr Cys
305                 310                 315                 320

aac gcc atc gtg gac gac tgc aaa gaa ctg gcc cac gca ctt ttc cat   1008
Asn Ala Ile Val Asp Asp Cys Lys Glu Leu Ala His Ala Leu Phe His
                325                 330                 335

tcc gcc tgg tgg gtg cag gac aag cga tac cag cgg act gtc atc cag   1056
Ser Ala Trp Trp Val Gln Asp Lys Arg Tyr Gln Arg Thr Val Ile Gln
```

```
            340                 345                 350

ttc ctg cag aaa ctg cag cag ccc atg acc ttc acc gcc atg aac ata   1104
Phe Leu Gln Lys Leu Gln Gln Pro Met Thr Phe Thr Ala Met Asn Ile
        355                 360                 365

ttt aac att aat ttg gcc act aac atc aat gta gcc aag ttc gcc ttc   1152
Phe Asn Ile Asn Leu Ala Thr Asn Ile Asn Val Ala Lys Phe Ala Phe
    370                 375                 380

acc gtg tac gcc atc gcg agc ggt atg aac ctg gac caa aag tta agc   1200
Thr Val Tyr Ala Ile Ala Ser Gly Met Asn Leu Asp Gln Lys Leu Ser
385                 390                 395                 400

att aag gaa tag                                                  1212
Ile Lys Glu
```

<210> 10
<211> 403
<212> PRT
<213> Drosophila melanogaster

<400> 10

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Met Phe Gly His Phe Lys Leu Val Tyr Pro Ala Pro Ile Ser Glu Pro
  1               5                  10                  15

Ile Gln Ser Arg Asp Ser Asn Ala Tyr Met Met Glu Thr Leu Arg Asn
             20                  25                  30

Ser Gly Leu Asn Leu Lys Asn Asp Phe Gly Ile Gly Arg Lys Ile Trp
         35                  40                  45

Arg Val Phe Ser Phe Thr Tyr Asn Met Val Ile Leu Pro Val Ser Phe
     50                  55                  60

Pro Ile Asn Tyr Val Ile His Leu Ala Glu Phe Pro Pro Glu Leu Leu
 65                  70                  75                  80

Leu Gln Ser Leu Gln Leu Cys Leu Asn Thr Trp Cys Phe Ala Leu Lys
                 85                  90                  95

Phe Phe Thr Leu Ile Val Tyr Thr His Arg Leu Glu Leu Ala Asn Lys
            100                 105                 110

His Phe Asp Glu Leu Asp Lys Tyr Cys Val Lys Pro Ala Glu Lys Arg
        115                 120                 125
```

```
Lys Val Arg Asp Met Val Ala Thr Ile Thr Arg Leu Tyr Leu Thr Phe
    130                 135                 140

Val Val Val Tyr Val Leu Tyr Ala Thr Ser Thr Leu Leu Asp Gly Leu
145                 150                 155                 160

Leu His His Arg Val Pro Tyr Asn Thr Tyr Tyr Pro Phe Ile Asn Trp
                165                 170                 175

Arg Val Asp Arg Thr Gln Met Tyr Ile Gln Ser Phe Leu Glu Tyr Phe
            180                 185                 190

Thr Val Gly Tyr Ala Ile Tyr Val Ala Thr Ala Thr Asp Ser Tyr Pro
        195                 200                 205

Val Ile Tyr Val Ala Ala Leu Arg Thr His Ile Leu Leu Leu Lys Asp
    210                 215                 220

Arg Ile Ile Tyr Leu Gly Asp Pro Ser Asn Glu Gly Ser Ser Asp Pro
225                 230                 235                 240

Ser Tyr Met Phe Lys Ser Leu Val Asp Cys Ile Lys Ala His Arg Thr
                245                 250                 255

Met Leu Asn Phe Cys Asp Ala Ile Gln Pro Ile Ile Ser Gly Thr Ile
            260                 265                 270

Phe Ala Gln Phe Ile Ile Cys Gly Ser Ile Leu Gly Ile Ile Met Ile
        275                 280                 285

Asn Met Val Leu Phe Ala Asp Gln Ser Thr Arg Phe Gly Ile Val Ile
    290                 295                 300

Tyr Val Met Ala Val Leu Leu Gln Thr Phe Pro Leu Cys Phe Tyr Cys
305                 310                 315                 320

Asn Ala Ile Val Asp Asp Cys Lys Glu Leu Ala His Ala Leu Phe His
                325                 330                 335

Ser Ala Trp Trp Val Gln Asp Lys Arg Tyr Gln Arg Thr Val Ile Gln
            340                 345                 350

Phe Leu Gln Lys Leu Gln Gln Pro Met Thr Phe Thr Ala Met Asn Ile
        355                 360                 365

Phe Asn Ile Asn Leu Ala Thr Asn Ile Asn Val Ala Lys Phe Ala Phe
    370                 375                 380
```

```
Thr Val Tyr Ala Ile Ala Ser Gly Met Asn Leu Asp Gln Lys Leu Ser
385                 390                 395                 400

Ile Lys Glu
```

<210> 11
<211> 1137
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1134)
<223> DOR 33B.1, a coding region on BDGP Clone No. AC006240

<400> 11

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atg gat tca aga agg aaa gtc cga agt gaa aat ctt tac aaa acc tat   48
Met Asp Ser Arg Arg Lys Val Arg Ser Glu Asn Leu Tyr Lys Thr Tyr
  1               5                  10                  15

tgg ctt tac tgg cga ctt ctg gga gtc gag ggc gat tat cct ttt cga   96
Trp Leu Tyr Trp Arg Leu Leu Gly Val Glu Gly Asp Tyr Pro Phe Arg
             20                  25                  30

cgg cta gtg gat ttt aca atc acg tct ttc att acg att tta ttt ccc   144
Arg Leu Val Asp Phe Thr Ile Thr Ser Phe Ile Thr Ile Leu Phe Pro
         35                  40                  45

gtg cat ctt ata ctg gga atg tat aaa aag ccc cag att caa gtc ttc   192
Val His Leu Ile Leu Gly Met Tyr Lys Lys Pro Gln Ile Gln Val Phe
     50                  55                  60

agg agt ctg cat ttc aca tcg gaa tgc ctt ttc tgc agc tat aag ttt   240
Arg Ser Leu His Phe Thr Ser Glu Cys Leu Phe Cys Ser Tyr Lys Phe
 65                  70                  75                  80

ttc tgt ttt cgt tgg aaa ctt aaa gaa ata aag acc atc gaa gga ttg   288
Phe Cys Phe Arg Trp Lys Leu Lys Glu Ile Lys Thr Ile Glu Gly Leu
                 85                  90                  95

ctc cag gat ctc gat agt cga gtt gaa agt gaa gaa gaa cgc aac tac   336
Leu Gln Asp Leu Asp Ser Arg Val Glu Ser Glu Glu Glu Arg Asn Tyr
            100                 105                 110
```

```
ttt aat caa aat cca agt cgt gtg gct cga atg ctt tcg aaa agt tac   384
Phe Asn Gln Asn Pro Ser Arg Val Ala Arg Met Leu Ser Lys Ser Tyr
        115                 120                 125

ttg gta gct gct ata tcg gcc ata atc act gca act gta gct ggt tta   432
Leu Val Ala Ala Ile Ser Ala Ile Ile Thr Ala Thr Val Ala Gly Leu
    130                 135                 140

ttt agt act ggt cga aat tta atg tat ctg ggt tgg ttt ccc tac gat   480
Phe Ser Thr Gly Arg Asn Leu Met Tyr Leu Gly Trp Phe Pro Tyr Asp
145                 150                 155                 160

ttt caa gca acc gcc gca atc tat tgg att agt ttt tcc tat cag gcg   528
Phe Gln Ala Thr Ala Ala Ile Tyr Trp Ile Ser Phe Ser Tyr Gln Ala
                165                 170                 175

att ggc tct agt ctg ttg att ctg gaa aat ctg gcc aac gat tca tat   576
Ile Gly Ser Ser Leu Leu Ile Leu Glu Asn Leu Ala Asn Asp Ser Tyr
            180                 185                 190

ccg ccg att aca ttt tgt gtg gtc tct gga cat gtg aga cta ttg ata   624
Pro Pro Ile Thr Phe Cys Val Val Ser Gly His Val Arg Leu Leu Ile
        195                 200                 205

atg cgt tta agt cga att ggt cac gat gta aaa tta tca agt tcg gaa   672
Met Arg Leu Ser Arg Ile Gly His Asp Val Lys Leu Ser Ser Ser Glu
    210                 215                 220

aat acc aga aaa ctc atc gaa ggt atc cag gat cac agg aaa cta atg   720
Asn Thr Arg Lys Leu Ile Glu Gly Ile Gln Asp His Arg Lys Leu Met
225                 230                 235                 240

aag ata ata cgc cta ctt cgc agc act tta cat ctt agc caa ctg ggc   768
Lys Ile Ile Arg Leu Leu Arg Ser Thr Leu His Leu Ser Gln Leu Gly
                245                 250                 255

cag ttc ctt tct agt gga atc aac att tcc ata aca ctc atc aac atc   816
Gln Phe Leu Ser Ser Gly Ile Asn Ile Ser Ile Thr Leu Ile Asn Ile
            260                 265                 270

ctg ttc ttt gcg gaa aac aac ttt gca atg ctt tat tat gcg gtg ttc   864
Leu Phe Phe Ala Glu Asn Asn Phe Ala Met Leu Tyr Tyr Ala Val Phe
        275                 280                 285

ttt gct gca atg tta ata gaa cta ttt cca agt tgt tac tat gga att   912
Phe Ala Ala Met Leu Ile Glu Leu Phe Pro Ser Cys Tyr Tyr Gly Ile
    290                 295                 300
```

```
ctg atg aca atg gag ttt gat aag cta cca tat gcc atc ttc tcc agc   960
Leu Met Thr Met Glu Phe Asp Lys Leu Pro Tyr Ala Ile Phe Ser Ser
305                 310                 315                 320

aac tgg ctt aaa atg gat aaa aga tac aat cga tcc ttg ata att ctg   1008
Asn Trp Leu Lys Met Asp Lys Arg Tyr Asn Arg Ser Leu Ile Ile Leu
                325                 330                 335

atg caa cta aca ctg gtt cca gtg aat ata aaa gca ggt ggt att gtt   1056
Met Gln Leu Thr Leu Val Pro Val Asn Ile Lys Ala Gly Gly Ile Val
            340                 345                 350

ggc atc gat atg agt gca ttt ttt gcc aca gtt cgg atg gca tat tcc   1104
Gly Ile Asp Met Ser Ala Phe Phe Ala Thr Val Arg Met Ala Tyr Ser
        355                 360                 365

ttt tac act tta gcc ttg tca ttt cga gta tag                      1137
Phe Tyr Thr Leu Ala Leu Ser Phe Arg Val
    370                 375
```

<210> 12
<211> 378
<212> PRT
<213> Drosophila melanogaster

<400> 12

```
Met Asp Ser Arg Arg Lys Val Arg Ser Glu Asn Leu Tyr Lys Thr Tyr
  1               5                  10                  15

Trp Leu Tyr Trp Arg Leu Leu Gly Val Glu Gly Asp Tyr Pro Phe Arg
             20                  25                  30

Arg Leu Val Asp Phe Thr Ile Thr Ser Phe Ile Thr Ile Leu Phe Pro
         35                  40                  45

Val His Leu Ile Leu Gly Met Tyr Lys Lys Pro Gln Ile Gln Val Phe
     50                  55                  60

Arg Ser Leu His Phe Thr Ser Glu Cys Leu Phe Cys Ser Tyr Lys Phe
 65                  70                  75                  80

Phe Cys Phe Arg Trp Lys Leu Lys Glu Ile Lys Thr Ile Glu Gly Leu
                 85                  90                  95

Leu Gln Asp Leu Asp Ser Arg Val Glu Ser Glu Glu Glu Arg Asn Tyr
            100                 105                 110
```

```
Phe Asn Gln Asn Pro Ser Arg Val Ala Arg Met Leu Ser Lys Ser Tyr
        115                 120                 125

Leu Val Ala Ala Ile Ser Ala Ile Ile Thr Ala Thr Val Ala Gly Leu
    130                 135                 140

Phe Ser Thr Gly Arg Asn Leu Met Tyr Leu Gly Trp Phe Pro Tyr Asp
145                 150                 155                 160

Phe Gln Ala Thr Ala Ala Ile Tyr Trp Ile Ser Phe Ser Tyr Gln Ala
                165                 170                 175

Ile Gly Ser Ser Leu Leu Ile Leu Glu Asn Leu Ala Asn Asp Ser Tyr
            180                 185                 190

Pro Pro Ile Thr Phe Cys Val Val Ser Gly His Val Arg Leu Leu Ile
        195                 200                 205

Met Arg Leu Ser Arg Ile Gly His Asp Val Lys Leu Ser Ser Ser Glu
    210                 215                 220

Asn Thr Arg Lys Leu Ile Glu Gly Ile Gln Asp His Arg Lys Leu Met
225                 230                 235                 240

Lys Ile Ile Arg Leu Leu Arg Ser Thr Leu His Leu Ser Gln Leu Gly
                245                 250                 255

Gln Phe Leu Ser Ser Gly Ile Asn Ile Ser Ile Thr Leu Ile Asn Ile
            260                 265                 270

Leu Phe Phe Ala Glu Asn Asn Phe Ala Met Leu Tyr Tyr Ala Val Phe
        275                 280                 285

Phe Ala Ala Met Leu Ile Glu Leu Phe Pro Ser Cys Tyr Tyr Gly Ile
    290                 295                 300

Leu Met Thr Met Glu Phe Asp Lys Leu Pro Tyr Ala Ile Phe Ser Ser
305                 310                 315                 320

Asn Trp Leu Lys Met Asp Lys Arg Tyr Asn Arg Ser Leu Ile Ile Leu
                325                 330                 335

Met Gln Leu Thr Leu Val Pro Val Asn Ile Lys Ala Gly Gly Ile Val
            340                 345                 350

Gly Ile Asp Met Ser Ala Phe Phe Ala Thr Val Arg Met Ala Tyr Ser
        355                 360                 365
```

```
Phe Tyr Thr Leu Ala Leu Ser Phe Arg Val
    370                 375
```

<210> 13
<211> 1140
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1137)
<223> DOR 33B.2, a coding region on BDGP Clone No. AC006240

<400> 13

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atg gac tta aaa ccg cga gtc att cga agt gaa gat atc tac aga acc   48
Met Asp Leu Lys Pro Arg Val Ile Arg Ser Glu Asp Ile Tyr Arg Thr
  1               5                  10                  15

tat tgg tta tat tgg cat ctt ttg ggc ctg gaa agc aat ttc ttt ctg   96
Tyr Trp Leu Tyr Trp His Leu Leu Gly Leu Glu Ser Asn Phe Phe Leu
             20                  25                  30

aat cgc ttg ttg gat ttg gtg att aca att ttc gta acc att tgg tat   144
Asn Arg Leu Leu Asp Leu Val Ile Thr Ile Phe Val Thr Ile Trp Tyr
         35                  40                  45

cca att cac ctg att ctg gga ctg ttt atg gaa aga tct ttg ggg gat   192
Pro Ile His Leu Ile Leu Gly Leu Phe Met Glu Arg Ser Leu Gly Asp
     50                  55                  60

gtc tgc aag ggt cta cca att acg gca gca tgc ttt ttc gcc agc ttt   240
Val Cys Lys Gly Leu Pro Ile Thr Ala Ala Cys Phe Phe Ala Ser Phe
 65                  70                  75                  80

aaa ttt att tgt ttt cgc ttc aag cta tct gaa att aaa gaa atc gaa   288
Lys Phe Ile Cys Phe Arg Phe Lys Leu Ser Glu Ile Lys Glu Ile Glu
                 85                  90                  95

ata tta ttt aaa gag ctg gat cag cga gct tta agt cga gag gaa tgc   336
Ile Leu Phe Lys Glu Leu Asp Gln Arg Ala Leu Ser Arg Glu Glu Cys
            100                 105                 110

gag ttt ttc aat caa aat acg aga cgt gag gcg aat ttc att tgg aaa   384
Glu Phe Phe Asn Gln Asn Thr Arg Arg Glu Ala Asn Phe Ile Trp Lys
        115                 120                 125
```

```
agt ttc att gtg gcc tat gga ctg tcg aat atc tcg gct att gca tca   432
Ser Phe Ile Val Ala Tyr Gly Leu Ser Asn Ile Ser Ala Ile Ala Ser
    130                 135                 140

gtt ctt ttc ggc ggt gga cat aag cta tta tat ccc gcc tgg ttt cca   480
Val Leu Phe Gly Gly Gly His Lys Leu Leu Tyr Pro Ala Trp Phe Pro
145                 150                 155                 160

tac gat gtg cag gcc acg gaa cta ata ttt tgg cta agt gta aca tac   528
Tyr Asp Val Gln Ala Thr Glu Leu Ile Phe Trp Leu Ser Val Thr Tyr
            165                 170                 175

caa att gcc gga gta agt ttg gcc ata ctt cag aat ttg gcc aat gat   576
Gln Ile Ala Gly Val Ser Leu Ala Ile Leu Gln Asn Leu Ala Asn Asp
        180                 185                 190

tcc tat cca ccg atg aca ttt tgc gtg gtt gcc ggt cat gta aga ctt   624
Ser Tyr Pro Pro Met Thr Phe Cys Val Val Ala Gly His Val Arg Leu
    195                 200                 205

ttg gcg atg cgc ttg agt aga att ggc caa ggt cca gag gaa aca ata   672
Leu Ala Met Arg Leu Ser Arg Ile Gly Gln Gly Pro Glu Glu Thr Ile
210                 215                 220

tac tta acc gga aag caa tta atc gaa agc atc gag gat cac cga aaa   720
Tyr Leu Thr Gly Lys Gln Leu Ile Glu Ser Ile Glu Asp His Arg Lys
225                 230                 235                 240

cta atg aaa ata gtg gaa tta ctg cgc agc acc atg aat att tcg cag   768
Leu Met Lys Ile Val Glu Leu Leu Arg Ser Thr Met Asn Ile Ser Gln
                245                 250                 255

ctc ggc cag ttt att tca agt ggt gtt aat att tcc ata aca cta gtc   816
Leu Gly Gln Phe Ile Ser Ser Gly Val Asn Ile Ser Ile Thr Leu Val
        260                 265                 270

aac att ctc ttc ttt gcg gat aat aat ttc gct ata acc tac tac gga   864
Asn Ile Leu Phe Phe Ala Asp Asn Asn Phe Ala Ile Thr Tyr Tyr Gly
    275                 280                 285

gtg tac ttc cta tcg atg gtg ttg gaa tta ttc ccg tgc tgc tat tac   912
Val Tyr Phe Leu Ser Met Val Leu Glu Leu Phe Pro Cys Cys Tyr Tyr
290                 295                 300

ggc acc ctg ata tcc gtg gag atg aac cag ctg acc tat gcg att tac   960
Gly Thr Leu Ile Ser Val Glu Met Asn Gln Leu Thr Tyr Ala Ile Tyr
305                 310                 315                 320
```

```
tca agt aac tgg atg agt atg aat cgg agc tac agc cgc atc cta ctg   1008
Ser Ser Asn Trp Met Ser Met Asn Arg Ser Tyr Ser Arg Ile Leu Leu
                325                 330                 335

atc ttc atg caa ctc acc ctg gcg gaa gtg cag atc aag gcc ggt ggg   1056
Ile Phe Met Gln Leu Thr Leu Ala Glu Val Gln Ile Lys Ala Gly Gly
            340                 345                 350

atg att ggc atc gga atg aac gcc ttc ttt gcc acc gtg cga ttg gcc   1104
Met Ile Gly Ile Gly Met Asn Ala Phe Phe Ala Thr Val Arg Leu Ala
        355                 360                 365

tac tcc ttc ttc act ttg gcc atg tcg ctg cgt taa                   1140
Tyr Ser Phe Phe Thr Leu Ala Met Ser Leu Arg
    370                 375
```

<210> 14
<211> 379
<212> PRT
<213> Drosophila melanogaster

<400> 14

```
Met Asp Leu Lys Pro Arg Val Ile Arg Ser Glu Asp Ile Tyr Arg Thr
  1               5                  10                  15

Tyr Trp Leu Tyr Trp His Leu Leu Gly Leu Glu Ser Asn Phe Phe Leu
             20                  25                  30

Asn Arg Leu Leu Asp Leu Val Ile Thr Ile Phe Val Thr Ile Trp Tyr
         35                  40                  45

Pro Ile His Leu Ile Leu Gly Leu Phe Met Glu Arg Ser Leu Gly Asp
     50                  55                  60

Val Cys Lys Gly Leu Pro Ile Thr Ala Ala Cys Phe Phe Ala Ser Phe
 65                  70                  75                  80

Lys Phe Ile Cys Phe Arg Phe Lys Leu Ser Glu Ile Lys Glu Ile Glu
                 85                  90                  95

Ile Leu Phe Lys Glu Leu Asp Gln Arg Ala Leu Ser Arg Glu Glu Cys
            100                 105                 110

Glu Phe Phe Asn Gln Asn Thr Arg Arg Glu Ala Asn Phe Ile Trp Lys
        115                 120                 125
```

```
Ser Phe Ile Val Ala Tyr Gly Leu Ser Asn Ile Ser Ala Ile Ala Ser
    130                 135                 140

Val Leu Phe Gly Gly Gly His Lys Leu Leu Tyr Pro Ala Trp Phe Pro
145                 150                 155                 160

Tyr Asp Val Gln Ala Thr Glu Leu Ile Phe Trp Leu Ser Val Thr Tyr
                165                 170                 175

Gln Ile Ala Gly Val Ser Leu Ala Ile Leu Gln Asn Leu Ala Asn Asp
            180                 185                 190

Ser Tyr Pro Pro Met Thr Phe Cys Val Val Ala Gly His Val Arg Leu
        195                 200                 205

Leu Ala Met Arg Leu Ser Arg Ile Gly Gln Gly Pro Glu Glu Thr Ile
    210                 215                 220

Tyr Leu Thr Gly Lys Gln Leu Ile Glu Ser Ile Glu Asp His Arg Lys
225                 230                 235                 240

Leu Met Lys Ile Val Glu Leu Leu Arg Ser Thr Met Asn Ile Ser Gln
                245                 250                 255

Leu Gly Gln Phe Ile Ser Ser Gly Val Asn Ile Ser Ile Thr Leu Val
            260                 265                 270

Asn Ile Leu Phe Phe Ala Asp Asn Asn Phe Ala Ile Thr Tyr Tyr Gly
        275                 280                 285

Val Tyr Phe Leu Ser Met Val Leu Glu Leu Phe Pro Cys Cys Tyr Tyr
    290                 295                 300

Gly Thr Leu Ile Ser Val Glu Met Asn Gln Leu Thr Tyr Ala Ile Tyr
305                 310                 315                 320

Ser Ser Asn Trp Met Ser Met Asn Arg Ser Tyr Ser Arg Ile Leu Leu
                325                 330                 335

Ile Phe Met Gln Leu Thr Leu Ala Glu Val Gln Ile Lys Ala Gly Gly
            340                 345                 350

Met Ile Gly Ile Gly Met Asn Ala Phe Phe Ala Thr Val Arg Leu Ala
        355                 360                 365

Tyr Ser Phe Phe Thr Leu Ala Met Ser Leu Arg
    370                 375
```

<210> 15
<211> 1155
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1152)
<223> DOR 33B3.3, a coding region on BDGP Clone No. AC006240

<400> 15

```
atg gtc att atc gac agt ctt agt ttt tat cgt cca ttc tgg atc tgc   48
Met Val Ile Ile Asp Ser Leu Ser Phe Tyr Arg Pro Phe Trp Ile Cys
  1               5                  10                  15

atg cga ttg ctg gta ccg act ttc ttc aag gat tcc tca cgt cct gtc   96
Met Arg Leu Leu Val Pro Thr Phe Phe Lys Asp Ser Ser Arg Pro Val
             20                  25                  30

cag ctg tac gtg gtg ttg ctg cac atc ctg gtc acc ttg tgg ttt cca   144
Gln Leu Tyr Val Val Leu Leu His Ile Leu Val Thr Leu Trp Phe Pro
         35                  40                  45

ctg cat ctg ctg ctg cat ctt ctg cta ctt cca tct acc gct gag ttc   192
Leu His Leu Leu Leu His Leu Leu Leu Leu Pro Ser Thr Ala Glu Phe
     50                  55                  60

ttt aag aac ctg acc atg tct ctg act tgt gtg gcc tgc agt ctg aag   240
Phe Lys Asn Leu Thr Met Ser Leu Thr Cys Val Ala Cys Ser Leu Lys
 65                  70                  75                  80

cat gtg gcc cac ttg tat cac ttg ccg cag att gtg gaa atc gaa tca   288
His Val Ala His Leu Tyr His Leu Pro Gln Ile Val Glu Ile Glu Ser
                 85                  90                  95

ctg atc gag caa tta gac aca ttt att gcc agc gaa cag gag cat cgt   336
Leu Ile Glu Gln Leu Asp Thr Phe Ile Ala Ser Glu Gln Glu His Arg
            100                 105                 110

tac tat cgg gat cac gta cat tgc cat gct agg cgc ttt aca aga tgt   384
Tyr Tyr Arg Asp His Val His Cys His Ala Arg Arg Phe Thr Arg Cys
        115                 120                 125

ctc tat att agc ttt ggc atg atc tat gcg ctt ttc ctg ttc ggc gtc   432
Leu Tyr Ile Ser Phe Gly Met Ile Tyr Ala Leu Phe Leu Phe Gly Val
```

```
    130                 135                 140

ttc gtt cag gtt att agc gga aat tgg gaa ctt ctc tat cca gcc tat   480
Phe Val Gln Val Ile Ser Gly Asn Trp Glu Leu Leu Tyr Pro Ala Tyr
145                 150                 155                 160

ttc cca ttc gac ttg gag agc aat cgc ttt ctc ggc gca gta gcc ttg   528
Phe Pro Phe Asp Leu Glu Ser Asn Arg Phe Leu Gly Ala Val Ala Leu
                165                 170                 175

ggc tat cag gta ttc agc atg tta gtt gaa ggc ttc cag ggg ctg ggc   576
Gly Tyr Gln Val Phe Ser Met Leu Val Glu Gly Phe Gln Gly Leu Gly
            180                 185                 190

aac gat acc tat acc cca ctg acc cta tgc ctt ctg gcc gga cat gtc   624
Asn Asp Thr Tyr Thr Pro Leu Thr Leu Cys Leu Leu Ala Gly His Val
        195                 200                 205

cat ttg tgg tcc ata cga atg ggt caa ctg gga tac ttc gat gac gag   672
His Leu Trp Ser Ile Arg Met Gly Gln Leu Gly Tyr Phe Asp Asp Glu
    210                 215                 220

acg gtg gtg aat cat cag cgt ttg ctg gat tac att gag cag cat aaa   720
Thr Val Val Asn His Gln Arg Leu Leu Asp Tyr Ile Glu Gln His Lys
225                 230                 235                 240

ctc ttg gtg cga ttc cac aac ctg gtg agc cgg acc atc agc gaa gtg   768
Leu Leu Val Arg Phe His Asn Leu Val Ser Arg Thr Ile Ser Glu Val
                245                 250                 255

caa ctg gtg cag ctg ggc gga tgt gga gcc act ctg tgc atc att gtc   816
Gln Leu Val Gln Leu Gly Gly Cys Gly Ala Thr Leu Cys Ile Ile Val
            260                 265                 270

tcc tac atg ctc ttc ttt gtg ggc gac aca atc tcg ctg gtc tac tac   864
Ser Tyr Met Leu Phe Phe Val Gly Asp Thr Ile Ser Leu Val Tyr Tyr
        275                 280                 285

ttg gtg ttc ttt gga gtg gtc tgc gtg cag ctc ttt ccc agc tgc tat   912
Leu Val Phe Phe Gly Val Val Cys Val Gln Leu Phe Pro Ser Cys Tyr
    290                 295                 300

ttt gcc agc gaa gta gcc gag gag ttg gaa cgg ctg cca tat gcg atc   960
Phe Ala Ser Glu Val Ala Glu Glu Leu Glu Arg Leu Pro Tyr Ala Ile
305                 310                 315                 320

ttc tcc agc aga tgg tac gat caa tcg cgg gat cat cga ttc gat ttg   1008
Phe Ser Ser Arg Trp Tyr Asp Gln Ser Arg Asp His Arg Phe Asp Leu
```

```
                325                 330                 335

ctc atc ttt aca caa tta aca ctg gga aac cgg ggg tgg atc atc aag   1056
Leu Ile Phe Thr Gln Leu Thr Leu Gly Asn Arg Gly Trp Ile Ile Lys
            340                 345                 350

gca gga ggt ctt atc gag ctg aat ttg aat gcc ttt ttc gcc acc ctg   1104
Ala Gly Gly Leu Ile Glu Leu Asn Leu Asn Ala Phe Phe Ala Thr Leu
        355                 360                 365

aag atg gcc tat tcc ctt ttt gca gtt gtg gtg cgg gca aag ggt ata   1152
Lys Met Ala Tyr Ser Leu Phe Ala Val Val Val Arg Ala Lys Gly Ile
    370                 375                 380

tag                                                               1155


<210> 16
<211> 384
<212> PRT
<213> Drosophila melanogaster

<400> 16
Met Val Ile Ile Asp Ser Leu Ser Phe Tyr Arg Pro Phe Trp Ile Cys
  1               5                  10                  15

Met Arg Leu Leu Val Pro Thr Phe Phe Lys Asp Ser Ser Arg Pro Val
             20                  25                  30

Gln Leu Tyr Val Val Leu Leu His Ile Leu Val Thr Leu Trp Phe Pro
         35                  40                  45

Leu His Leu Leu Leu His Leu Leu Leu Leu Pro Ser Thr Ala Glu Phe
     50                  55                  60

Phe Lys Asn Leu Thr Met Ser Leu Thr Cys Val Ala Cys Ser Leu Lys
 65                  70                  75                  80

His Val Ala His Leu Tyr His Leu Pro Gln Ile Val Glu Ile Glu Ser
                 85                  90                  95

Leu Ile Glu Gln Leu Asp Thr Phe Ile Ala Ser Glu Gln Glu His Arg
            100                 105                 110

Tyr Tyr Arg Asp His Val His Cys His Ala Arg Arg Phe Thr Arg Cys
        115                 120                 125

Leu Tyr Ile Ser Phe Gly Met Ile Tyr Ala Leu Phe Leu Phe Gly Val
```

```
    130                 135                 140

Phe Val Gln Val Ile Ser Gly Asn Trp Glu Leu Leu Tyr Pro Ala Tyr
145                 150                 155                 160

Phe Pro Phe Asp Leu Glu Ser Asn Arg Phe Leu Gly Ala Val Ala Leu
                165                 170                 175

Gly Tyr Gln Val Phe Ser Met Leu Val Glu Gly Phe Gln Gly Leu Gly
            180                 185                 190

Asn Asp Thr Tyr Thr Pro Leu Thr Leu Cys Leu Leu Ala Gly His Val
        195                 200                 205

His Leu Trp Ser Ile Arg Met Gly Gln Leu Gly Tyr Phe Asp Asp Glu
    210                 215                 220

Thr Val Val Asn His Gln Arg Leu Leu Asp Tyr Ile Glu Gln His Lys
225                 230                 235                 240

Leu Leu Val Arg Phe His Asn Leu Val Ser Arg Thr Ile Ser Glu Val
                245                 250                 255

Gln Leu Val Gln Leu Gly Gly Cys Gly Ala Thr Leu Cys Ile Ile Val
            260                 265                 270

Ser Tyr Met Leu Phe Phe Val Gly Asp Thr Ile Ser Leu Val Tyr Tyr
        275                 280                 285

Leu Val Phe Phe Gly Val Val Cys Val Gln Leu Phe Pro Ser Cys Tyr
    290                 295                 300

Phe Ala Ser Glu Val Ala Glu Glu Leu Glu Arg Leu Pro Tyr Ala Ile
305                 310                 315                 320

Phe Ser Ser Arg Trp Tyr Asp Gln Ser Arg Asp His Arg Phe Asp Leu
                325                 330                 335

Leu Ile Phe Thr Gln Leu Thr Leu Gly Asn Arg Gly Trp Ile Ile Lys
            340                 345                 350

Ala Gly Gly Leu Ile Glu Leu Asn Leu Asn Ala Phe Phe Ala Thr Leu
        355                 360                 365

Lys Met Ala Tyr Ser Leu Phe Ala Val Val Val Arg Ala Lys Gly Ile
    370                 375                 380
```

<210> 17
<211> 1152
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1149)
<223> DOR 43B.1, coding region of AF127926

<400> 17
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atg aca atc gag gat atc ggc ctg gtg ggc atc aac gtg cgg atg tgg   48
Met Thr Ile Glu Asp Ile Gly Leu Val Gly Ile Asn Val Arg Met Trp
  1               5                  10                  15

cga cac ttg gcc gtg ctg tac ccc act ccg ggc tcc agc tgg cgc aag   96
Arg His Leu Ala Val Leu Tyr Pro Thr Pro Gly Ser Ser Trp Arg Lys
             20                  25                  30

ttc gcc ttc gtg ctg ccg gtg act gcg atg aat ctg atg cag ttc gtc   144
Phe Ala Phe Val Leu Pro Val Thr Ala Met Asn Leu Met Gln Phe Val
         35                  40                  45

tac ctg ctg cgg atg tgg ggc gac ctg ccc gcc ttc att ctg aac atg   192
Tyr Leu Leu Arg Met Trp Gly Asp Leu Pro Ala Phe Ile Leu Asn Met
     50                  55                  60

ttc ttc ttc tcg gcc att ttc aac gcc ctg atg cgc acg tgg ctg gtc   240
Phe Phe Phe Ser Ala Ile Phe Asn Ala Leu Met Arg Thr Trp Leu Val
 65                  70                  75                  80

ata atc aag cgg cgc cag ttc gag gag ttt ctc ggc caa ctg gcc act   288
Ile Ile Lys Arg Arg Gln Phe Glu Glu Phe Leu Gly Gln Leu Ala Thr
                 85                  90                  95

ctg ttc cat tcg att ctc gac tcc acc gac gag tgg ggg cgt ggc atc   336
Leu Phe His Ser Ile Leu Asp Ser Thr Asp Glu Trp Gly Arg Gly Ile
            100                 105                 110

ctg cgg agg gcg gaa cgg gag gct cgg aac ctg gcc atc ctt aat ttg   384
Leu Arg Arg Ala Glu Arg Glu Ala Arg Asn Leu Ala Ile Leu Asn Leu
        115                 120                 125

agt gcc tcc ttc ctg gac att gtc ggt gct ctg ttt ttc gaa tat aaa   432
Ser Ala Ser Phe Leu Asp Ile Val Gly Ala Leu Phe Phe Glu Tyr Lys
    130                 135                 140
```

```
ttc cca att ggt gtt gtc act ttt ttc ctt cca gct cat ccc ttc ggc   480
Phe Pro Ile Gly Val Val Thr Phe Phe Leu Pro Ala His Pro Phe Gly
145                 150                 155                 160

tta gct cta cca gga gtg agc atg acc agt tca ccc gtc tac gag gtt   528
Leu Ala Leu Pro Gly Val Ser Met Thr Ser Ser Pro Val Tyr Glu Val
                165                 170                 175

atc tac ttg gcc caa ctg cct acg ccc ctg ctg ctg tcc atg atg tac   576
Ile Tyr Leu Ala Gln Leu Pro Thr Pro Leu Leu Leu Ser Met Met Tyr
            180                 185                 190

atg cct ttc gtc agc ctt ttt gcc ggc ctg gcc atc ttt ggg aag gcc   624
Met Pro Phe Val Ser Leu Phe Ala Gly Leu Ala Ile Phe Gly Lys Ala
        195                 200                 205

atg ctg cag atc ctg gta cac agg ctg ggc cag att ggc gga gaa gag   672
Met Leu Gln Ile Leu Val His Arg Leu Gly Gln Ile Gly Gly Glu Glu
    210                 215                 220

cag tcg gag gag gag cgc ttc caa agg ctg gcc tcc tgc att gcg tac   720
Gln Ser Glu Glu Glu Arg Phe Gln Arg Leu Ala Ser Cys Ile Ala Tyr
225                 230                 235                 240

cac acg cag gtg atg cgc tat gtg tgg cag ctc aac aaa ctg gtg gcc   768
His Thr Gln Val Met Arg Tyr Val Trp Gln Leu Asn Lys Leu Val Ala
                245                 250                 255

aac att gtg gcg gtg gaa gca att att ttt ggc tcg ata atc tgc tca   816
Asn Ile Val Ala Val Glu Ala Ile Ile Phe Gly Ser Ile Ile Cys Ser
            260                 265                 270

ctg ctc ttc tgt ctg aat att ata acc tca ccc acc cag gtg atc tcg   864
Leu Leu Phe Cys Leu Asn Ile Ile Thr Ser Pro Thr Gln Val Ile Ser
        275                 280                 285

ata gtg atg tac att ctg acc atg ctg tac gtt ctc ttc acc tac tac   912
Ile Val Met Tyr Ile Leu Thr Met Leu Tyr Val Leu Phe Thr Tyr Tyr
    290                 295                 300

aat cgg gcc aat gaa ata tgc ctc gag aac aac cgg gtg gcg gag gct   960
Asn Arg Ala Asn Glu Ile Cys Leu Glu Asn Asn Arg Val Ala Glu Ala
305                 310                 315                 320

gtt tac aat gtg ccc tgg tac gag gca gga act cgg ttt cgc aaa acc   1008
Val Tyr Asn Val Pro Trp Tyr Glu Ala Gly Thr Arg Phe Arg Lys Thr
                325                 330                 335
```

```
ctc ctg atc ttc ttg atg caa aca caa cac ccg atg gag ata aga gtc   1056
Leu Leu Ile Phe Leu Met Gln Thr Gln His Pro Met Glu Ile Arg Val
            340                 345                 350

ggc aac gtt tac ccc atg aca ttg gcc atg ttc cag agt ctg ttg aat   1104
Gly Asn Val Tyr Pro Met Thr Leu Ala Met Phe Gln Ser Leu Leu Asn
        355                 360                 365

gcg tcc tac tcc tac ttt acc atg ctg cgt ggc gtc acc ggc aaa tga   1152
Ala Ser Tyr Ser Tyr Phe Thr Met Leu Arg Gly Val Thr Gly Lys
    370                 375                 380
```

<210> 18
<211> 383
<212> PRT
<213> Drosophila melanogaster

<400> 18

```
Met Thr Ile Glu Asp Ile Gly Leu Val Gly Ile Asn Val Arg Met Trp
  1               5                  10                  15

Arg His Leu Ala Val Leu Tyr Pro Thr Pro Gly Ser Ser Trp Arg Lys
             20                  25                  30

Phe Ala Phe Val Leu Pro Val Thr Ala Met Asn Leu Met Gln Phe Val
         35                  40                  45

Tyr Leu Leu Arg Met Trp Gly Asp Leu Pro Ala Phe Ile Leu Asn Met
     50                  55                  60

Phe Phe Phe Ser Ala Ile Phe Asn Ala Leu Met Arg Thr Trp Leu Val
 65                  70                  75                  80

Ile Ile Lys Arg Arg Gln Phe Glu Glu Phe Leu Gly Gln Leu Ala Thr
                 85                  90                  95

Leu Phe His Ser Ile Leu Asp Ser Thr Asp Glu Trp Gly Arg Gly Ile
            100                 105                 110

Leu Arg Arg Ala Glu Arg Glu Ala Arg Asn Leu Ala Ile Leu Asn Leu
        115                 120                 125

Ser Ala Ser Phe Leu Asp Ile Val Gly Ala Leu Phe Phe Glu Tyr Lys
    130                 135                 140

Phe Pro Ile Gly Val Val Thr Phe Phe Leu Pro Ala His Pro Phe Gly
145                 150                 155                 160
```

```
Leu Ala Leu Pro Gly Val Ser Met Thr Ser Ser Pro Val Tyr Glu Val
                165                 170                 175

Ile Tyr Leu Ala Gln Leu Pro Thr Pro Leu Leu Leu Ser Met Met Tyr
            180                 185                 190

Met Pro Phe Val Ser Leu Phe Ala Gly Leu Ala Ile Phe Gly Lys Ala
        195                 200                 205

Met Leu Gln Ile Leu Val His Arg Leu Gly Gln Ile Gly Gly Glu Glu
    210                 215                 220

Gln Ser Glu Glu Glu Arg Phe Gln Arg Leu Ala Ser Cys Ile Ala Tyr
225                 230                 235                 240

His Thr Gln Val Met Arg Tyr Val Trp Gln Leu Asn Lys Leu Val Ala
                245                 250                 255

Asn Ile Val Ala Val Glu Ala Ile Ile Phe Gly Ser Ile Ile Cys Ser
            260                 265                 270

Leu Leu Phe Cys Leu Asn Ile Ile Thr Ser Pro Thr Gln Val Ile Ser
        275                 280                 285

Ile Val Met Tyr Ile Leu Thr Met Leu Tyr Val Leu Phe Thr Tyr Tyr
    290                 295                 300

Asn Arg Ala Asn Glu Ile Cys Leu Glu Asn Asn Arg Val Ala Glu Ala
305                 310                 315                 320

Val Tyr Asn Val Pro Trp Tyr Glu Ala Gly Thr Arg Phe Arg Lys Thr
                325                 330                 335

Leu Leu Ile Phe Leu Met Gln Thr Gln His Pro Met Glu Ile Arg Val
            340                 345                 350

Gly Asn Val Tyr Pro Met Thr Leu Ala Met Phe Gln Ser Leu Leu Asn
        355                 360                 365

Ala Ser Tyr Ser Tyr Phe Thr Met Leu Arg Gly Val Thr Gly Lys
    370                 375                 380
```

<210> 19
<211> 1158
<212> DNA

<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1155)
<223> DOR 46F.1, a coding region on BDGP Clone No.
AC005974

<400> 19

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atg agc aaa gga gta gaa atc ttt tac aag ggc cag aag gca ttc ttg   48
Met Ser Lys Gly Val Glu Ile Phe Tyr Lys Gly Gln Lys Ala Phe Leu
  1               5                  10                  15

aac atc ctc tcg ttg tgg cct cag ata gaa cgc cgg tgg aga atc atc   96
Asn Ile Leu Ser Leu Trp Pro Gln Ile Glu Arg Arg Trp Arg Ile Ile
             20                  25                  30

cac cag gtg aac tat gtc cac gta att gtg ttt tgg gtg ctg ctc ttt   144
His Gln Val Asn Tyr Val His Val Ile Val Phe Trp Val Leu Leu Phe
         35                  40                  45

gat ctc ctc ttg gtg ctc cat gtg atg gct aat ttg agc tac atg tcc   192
Asp Leu Leu Leu Val Leu His Val Met Ala Asn Leu Ser Tyr Met Ser
     50                  55                  60

gag gtt gtg aaa gcc atc ttt atc ctg gcc acc agt gca ggg cac acc   240
Glu Val Val Lys Ala Ile Phe Ile Leu Ala Thr Ser Ala Gly His Thr
 65                  70                  75                  80

acc aag ctg ctg tcc ata aag gcg aac aat gtg cag atg gag gag ctc   288
Thr Lys Leu Leu Ser Ile Lys Ala Asn Asn Val Gln Met Glu Glu Leu
                 85                  90                  95

ttt agg aga ttg gat aac gaa gag ttc cgt cct aga ggc gcc aac gaa   336
Phe Arg Arg Leu Asp Asn Glu Glu Phe Arg Pro Arg Gly Ala Asn Glu
            100                 105                 110

gag ttg atc ttt gca gca gcc tgt gaa aga agt agg aag ctt cgg gac   384
Glu Leu Ile Phe Ala Ala Ala Cys Glu Arg Ser Arg Lys Leu Arg Asp
        115                 120                 125

ttc tat gga gcg ctt tcg ttt gcc gcc ttg agc atg att ctc ata ccc   432
Phe Tyr Gly Ala Leu Ser Phe Ala Ala Leu Ser Met Ile Leu Ile Pro
    130                 135                 140

cag ttc gcc ttg gac tgg tcc cac ctt ccg ctc aaa aca tac aat ccg   480
Gln Phe Ala Leu Asp Trp Ser His Leu Pro Leu Lys Thr Tyr Asn Pro
145                 150                 155                 160
```

```
ctt ggc gag aat acc ggc tca cct gct tat tgg ctc ctc tac tgc tat   528
Leu Gly Glu Asn Thr Gly Ser Pro Ala Tyr Trp Leu Leu Tyr Cys Tyr
                165                 170                 175

cag tgt ctg gcc ttg tcc gta tcc tgc atc acc aac ata gga ttc gac   576
Gln Cys Leu Ala Leu Ser Val Ser Cys Ile Thr Asn Ile Gly Phe Asp
            180                 185                 190

tca ctc tgc tcc tca ctg ttc atc ttc ctc aag tgc cag ctg gac att   624
Ser Leu Cys Ser Ser Leu Phe Ile Phe Leu Lys Cys Gln Leu Asp Ile
        195                 200                 205

ctg gcc gtg cga ctg gac aag atc ggt cgg tta atc act act tct ggt   672
Leu Ala Val Arg Leu Asp Lys Ile Gly Arg Leu Ile Thr Thr Ser Gly
    210                 215                 220

ggc act gtg gaa cag caa ctt aag gaa aat atc cgc tat cac atg acc   720
Gly Thr Val Glu Gln Gln Leu Lys Glu Asn Ile Arg Tyr His Met Thr
225                 230                 235                 240

atc gtt gaa ctg tcg aaa acc gtg gag cgt cta ctt tgc aag ccg att   768
Ile Val Glu Leu Ser Lys Thr Val Glu Arg Leu Leu Cys Lys Pro Ile
                245                 250                 255

tcg gtg cag atc ttc tgc tcg gtt ttg gtg ctg act gcc aat ttc tat   816
Ser Val Gln Ile Phe Cys Ser Val Leu Val Leu Thr Ala Asn Phe Tyr
            260                 265                 270

gcc att gct gtg tta tct gac gag agg ctg gag ctc ttt aag tat gtg   864
Ala Ile Ala Val Leu Ser Asp Glu Arg Leu Glu Leu Phe Lys Tyr Val
        275                 280                 285

acc tat cag gcg tgc atg ttg att cag att ttt ata ttg tgc tac tat   912
Thr Tyr Gln Ala Cys Met Leu Ile Gln Ile Phe Ile Leu Cys Tyr Tyr
    290                 295                 300

gcc ggt gag gta acc cag cgc agc ctg gac ctt ccg cac gag ctg tac   960
Ala Gly Glu Val Thr Gln Arg Ser Leu Asp Leu Pro His Glu Leu Tyr
305                 310                 315                 320

aag acc tcc tgg gtg gac tgg gac tac agg agc cga agg att gcg ctc   1008
Lys Thr Ser Trp Val Asp Trp Asp Tyr Arg Ser Arg Arg Ile Ala Leu
                325                 330                 335

ctc ttt atg caa cgc ctt cac tcg acc ttg agg att agg aca ctt aat   1056
Leu Phe Met Gln Arg Leu His Ser Thr Leu Arg Ile Arg Thr Leu Asn
            340                 345                 350
```

```
cca agt ctt ggt ttt gac tta atg ctc ttc agc tcg gtg agt tct ttc   1104
Pro Ser Leu Gly Phe Asp Leu Met Leu Phe Ser Ser Val Ser Ser Phe
        355                 360                 365

cgt gtt ttg act ttt ttg tgc act gta gcc aat ttc cat aat gag gct   1152
Arg Val Leu Thr Phe Leu Cys Thr Val Ala Asn Phe His Asn Glu Ala
    370                 375                 380

cat tag                                                           1158
His
385
```

<210> 20
<211> 385
<212> PRT
<213> Drosophila melanogaster

<400> 20

```
Met Ser Lys Gly Val Glu Ile Phe Tyr Lys Gly Gln Lys Ala Phe Leu
  1               5                  10                  15

Asn Ile Leu Ser Leu Trp Pro Gln Ile Glu Arg Arg Trp Arg Ile Ile
             20                  25                  30

His Gln Val Asn Tyr Val His Val Ile Val Phe Trp Val Leu Leu Phe
         35                  40                  45

Asp Leu Leu Leu Val Leu His Val Met Ala Asn Leu Ser Tyr Met Ser
     50                  55                  60

Glu Val Val Lys Ala Ile Phe Ile Leu Ala Thr Ser Ala Gly His Thr
 65                  70                  75                  80

Thr Lys Leu Leu Ser Ile Lys Ala Asn Asn Val Gln Met Glu Glu Leu
                 85                  90                  95

Phe Arg Arg Leu Asp Asn Glu Glu Phe Arg Pro Arg Gly Ala Asn Glu
            100                 105                 110

Glu Leu Ile Phe Ala Ala Ala Cys Glu Arg Ser Arg Lys Leu Arg Asp
        115                 120                 125

Phe Tyr Gly Ala Leu Ser Phe Ala Ala Leu Ser Met Ile Leu Ile Pro
    130                 135                 140

Gln Phe Ala Leu Asp Trp Ser His Leu Pro Leu Lys Thr Tyr Asn Pro
```

```
145                 150                 155                 160

Leu Gly Glu Asn Thr Gly Ser Pro Ala Tyr Trp Leu Leu Tyr Cys Tyr
                165                 170                 175

Gln Cys Leu Ala Leu Ser Val Ser Cys Ile Thr Asn Ile Gly Phe Asp
            180                 185                 190

Ser Leu Cys Ser Ser Leu Phe Ile Phe Leu Lys Cys Gln Leu Asp Ile
        195                 200                 205

Leu Ala Val Arg Leu Asp Lys Ile Gly Arg Leu Ile Thr Thr Ser Gly
    210                 215                 220

Gly Thr Val Glu Gln Gln Leu Lys Glu Asn Ile Arg Tyr His Met Thr
225                 230                 235                 240

Ile Val Glu Leu Ser Lys Thr Val Glu Arg Leu Leu Cys Lys Pro Ile
                245                 250                 255

Ser Val Gln Ile Phe Cys Ser Val Leu Val Leu Thr Ala Asn Phe Tyr
            260                 265                 270

Ala Ile Ala Val Leu Ser Asp Glu Arg Leu Glu Leu Phe Lys Tyr Val
        275                 280                 285

Thr Tyr Gln Ala Cys Met Leu Ile Gln Ile Phe Ile Leu Cys Tyr Tyr
    290                 295                 300

Ala Gly Glu Val Thr Gln Arg Ser Leu Asp Leu Pro His Glu Leu Tyr
305                 310                 315                 320

Lys Thr Ser Trp Val Asp Trp Asp Tyr Arg Ser Arg Arg Ile Ala Leu
                325                 330                 335

Leu Phe Met Gln Arg Leu His Ser Thr Leu Arg Ile Arg Thr Leu Asn
            340                 345                 350

Pro Ser Leu Gly Phe Asp Leu Met Leu Phe Ser Ser Val Ser Ser Phe
        355                 360                 365

Arg Val Leu Thr Phe Leu Cys Thr Val Ala Asn Phe His Asn Glu Ala
    370                 375                 380

His
385
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<210> 21
<211> 1155
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1152)
<223> DOR 46F.2, a coding region on BDGP Clone No. AC005974

<400> 21
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atg gtt acg gag gac ttt tat aag tac cag gtg tgg tac ttc caa atc   48
Met Val Thr Glu Asp Phe Tyr Lys Tyr Gln Val Trp Tyr Phe Gln Ile
  1               5                  10                  15

ctt ggt gtt tgg cag ctc ccc act tgg gcc gca gac cac cag cgt cgt   96
Leu Gly Val Trp Gln Leu Pro Thr Trp Ala Ala Asp His Gln Arg Arg
             20                  25                  30

ttt cag tcc atg agg ttt ggc ttc atc ctg gtc atc ctg ttc atc atg   144
Phe Gln Ser Met Arg Phe Gly Phe Ile Leu Val Ile Leu Phe Ile Met
         35                  40                  45

ctg ctg ctt ttc tcc ttc gaa atg ttg aac aac att tcc caa gtt agg   192
Leu Leu Leu Phe Ser Phe Glu Met Leu Asn Asn Ile Ser Gln Val Arg
     50                  55                  60

gag atc cta aag gta ttc ttc atg ttc gcc acg gaa ata tcc tgc atg   240
Glu Ile Leu Lys Val Phe Phe Met Phe Ala Thr Glu Ile Ser Cys Met
 65                  70                  75                  80

gcc aaa tta ttg cat ttg aag ttg aag agc cgc aaa ctc gct ggc ttg   288
Ala Lys Leu Leu His Leu Lys Leu Lys Ser Arg Lys Leu Ala Gly Leu
                 85                  90                  95

gtt gat gcg atg ttg tcc cca gag ttc ggc gtt aaa agt gaa cag gaa   336
Val Asp Ala Met Leu Ser Pro Glu Phe Gly Val Lys Ser Glu Gln Glu
            100                 105                 110

atg cag atg ctg gaa ttg gat aga gtg gcg gtt gtc cgc atg agg aac   384
Met Gln Met Leu Glu Leu Asp Arg Val Ala Val Val Arg Met Arg Asn
        115                 120                 125

tcc tac ggc atc atg tcc ctg ggc gcg gct tcc ctg atc ctt ata gtt   432
Ser Tyr Gly Ile Met Ser Leu Gly Ala Ala Ser Leu Ile Leu Ile Val
    130                 135                 140
```

```
ccc tgt ttc gac aac ttt ggc gag cta cca ctg gcc atg ttg gag gta   480
Pro Cys Phe Asp Asn Phe Gly Glu Leu Pro Leu Ala Met Leu Glu Val
145                 150                 155                 160

tgc agc atc gag gga tgg atc tgc tat tgg tcg cag tac ctt ttc cac   528
Cys Ser Ile Glu Gly Trp Ile Cys Tyr Trp Ser Gln Tyr Leu Phe His
                165                 170                 175

tcg att tgc ctg ctg ccc act tgt gtg ctg aat ata acc tac gac tcg   576
Ser Ile Cys Leu Leu Pro Thr Cys Val Leu Asn Ile Thr Tyr Asp Ser
            180                 185                 190

gtg gcc tac tcg ttg ctc tgt ttc ttg aag gtt cag cta caa atg ctg   624
Val Ala Tyr Ser Leu Leu Cys Phe Leu Lys Val Gln Leu Gln Met Leu
        195                 200                 205

gtc ctg cga tta gaa aag ttg ggt cct gtg atc gaa ccc cag gat aat   672
Val Leu Arg Leu Glu Lys Leu Gly Pro Val Ile Glu Pro Gln Asp Asn
    210                 215                 220

gag aaa atc gca atg gaa ctg cgt gag tgt gcc gcc tac tac aac agg   720
Glu Lys Ile Ala Met Glu Leu Arg Glu Cys Ala Ala Tyr Tyr Asn Arg
225                 230                 235                 240

att gtt cgt ttc aag gac ctg gtg gag ctg ttc ata aag ggg cca gga   768
Ile Val Arg Phe Lys Asp Leu Val Glu Leu Phe Ile Lys Gly Pro Gly
                245                 250                 255

tct gtg cag ctc atg tgt tct gtt ctg gtg ctg gtg tcc aac ctg tac   816
Ser Val Gln Leu Met Cys Ser Val Leu Val Leu Val Ser Asn Leu Tyr
            260                 265                 270

gac atg tcc acc atg tcc att gca aac ggc gat gcc atc ttt atg ctc   864
Asp Met Ser Thr Met Ser Ile Ala Asn Gly Asp Ala Ile Phe Met Leu
        275                 280                 285

aag acc tgt atc tat cag ctg gtg atg ctc tgg cag atc ttc atc att   912
Lys Thr Cys Ile Tyr Gln Leu Val Met Leu Trp Gln Ile Phe Ile Ile
    290                 295                 300

tgc tac gcc tcc aac gag gta act gtc cag agc tct agg ttg tgt cac   960
Cys Tyr Ala Ser Asn Glu Val Thr Val Gln Ser Ser Arg Leu Cys His
305                 310                 315                 320

agc atc tac agc tcc caa tgg acg gga tgg aac agg gca aac cgc cgg  1008
Ser Ile Tyr Ser Ser Gln Trp Thr Gly Trp Asn Arg Ala Asn Arg Arg
                325                 330                 335
```

```
att gtc ctt ctc atg atg cag cgc ttt aat tcc ccg atg ctc ctg agc   1056
Ile Val Leu Leu Met Met Gln Arg Phe Asn Ser Pro Met Leu Leu Ser
            340                 345                 350

acc ttt aac ccc acc ttt gct ttc agc ttg gag gcc ttt ggt tct atc   1104
Thr Phe Asn Pro Thr Phe Ala Phe Ser Leu Glu Ala Phe Gly Ser Ile
        355                 360                 365

gtc aac tgc tcc tac agc tac ttc gca ctg ctg aag cgc gtc aac agt   1152
Val Asn Cys Ser Tyr Ser Tyr Phe Ala Leu Leu Lys Arg Val Asn Ser
    370                 375                 380

taa                                                               1155
```

<210> 22
<211> 384
<212> PRT
<213> Drosophila melanogaster

<400> 22

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Met Val Thr Glu Asp Phe Tyr Lys Tyr Gln Val Trp Tyr Phe Gln Ile
  1               5                  10                  15

Leu Gly Val Trp Gln Leu Pro Thr Trp Ala Ala Asp His Gln Arg Arg
             20                  25                  30

Phe Gln Ser Met Arg Phe Gly Phe Ile Leu Val Ile Leu Phe Ile Met
         35                  40                  45

Leu Leu Leu Phe Ser Phe Glu Met Leu Asn Asn Ile Ser Gln Val Arg
     50                  55                  60

Glu Ile Leu Lys Val Phe Phe Met Phe Ala Thr Glu Ile Ser Cys Met
 65                  70                  75                  80

Ala Lys Leu Leu His Leu Lys Leu Lys Ser Arg Lys Leu Ala Gly Leu
                 85                  90                  95

Val Asp Ala Met Leu Ser Pro Glu Phe Gly Val Lys Ser Glu Gln Glu
            100                 105                 110

Met Gln Met Leu Glu Leu Asp Arg Val Ala Val Val Arg Met Arg Asn
        115                 120                 125

Ser Tyr Gly Ile Met Ser Leu Gly Ala Ala Ser Leu Ile Leu Ile Val
    130                 135                 140
```

```
Pro Cys Phe Asp Asn Phe Gly Glu Leu Pro Leu Ala Met Leu Glu Val
145                 150                 155                 160

Cys Ser Ile Glu Gly Trp Ile Cys Tyr Trp Ser Gln Tyr Leu Phe His
                165                 170                 175

Ser Ile Cys Leu Leu Pro Thr Cys Val Leu Asn Ile Thr Tyr Asp Ser
            180                 185                 190

Val Ala Tyr Ser Leu Leu Cys Phe Leu Lys Val Gln Leu Gln Met Leu
        195                 200                 205

Val Leu Arg Leu Glu Lys Leu Gly Pro Val Ile Glu Pro Gln Asp Asn
    210                 215                 220

Glu Lys Ile Ala Met Glu Leu Arg Glu Cys Ala Ala Tyr Tyr Asn Arg
225                 230                 235                 240

Ile Val Arg Phe Lys Asp Leu Val Glu Leu Phe Ile Lys Gly Pro Gly
                245                 250                 255

Ser Val Gln Leu Met Cys Ser Val Leu Val Leu Val Ser Asn Leu Tyr
            260                 265                 270

Asp Met Ser Thr Met Ser Ile Ala Asn Gly Asp Ala Ile Phe Met Leu
        275                 280                 285

Lys Thr Cys Ile Tyr Gln Leu Val Met Leu Trp Gln Ile Phe Ile Ile
    290                 295                 300

Cys Tyr Ala Ser Asn Glu Val Thr Val Gln Ser Ser Arg Leu Cys His
305                 310                 315                 320

Ser Ile Tyr Ser Ser Gln Trp Thr Gly Trp Asn Arg Ala Asn Arg Arg
                325                 330                 335

Ile Val Leu Leu Met Met Gln Arg Phe Asn Ser Pro Met Leu Leu Ser
            340                 345                 350

Thr Phe Asn Pro Thr Phe Ala Phe Ser Leu Glu Ala Phe Gly Ser Ile
        355                 360                 365

Val Asn Cys Ser Tyr Ser Tyr Phe Ala Leu Leu Lys Arg Val Asn Ser
    370                 375                 380
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<210> 23
<211> 1158
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1155)
<223> DOR 47E.1, coding region of AF156880

<400> 23
atg gac agt ttt ctg caa gta cag aag agc acc att gcc ctt ctg ggc 48
Met Asp Ser Phe Leu Gln Val Gln Lys Ser Thr Ile Ala Leu Leu Gly
 1               5                  10                  15

ttt gat ctc ttt agt gaa aat cga gaa atg tgg aaa cgc ccc tat aga 96
Phe Asp Leu Phe Ser Glu Asn Arg Glu Met Trp Lys Arg Pro Tyr Arg
            20                  25                  30

gca atg aat gtg ttt agc ata gct gcc att ttt ccc ttt atc ctg gca 144
Ala Met Asn Val Phe Ser Ile Ala Ala Ile Phe Pro Phe Ile Leu Ala
        35                  40                  45

gct gtg ctc cat aat tgg aag aat gta ttg ctg ctg gcc gat gcc atg 192
Ala Val Leu His Asn Trp Lys Asn Val Leu Leu Leu Ala Asp Ala Met
    50                  55                  60

gtg gcc cta cta ata acc att ctg ggc cta ttc aag ttt agc atg ata 240
Val Ala Leu Leu Ile Thr Ile Leu Gly Leu Phe Lys Phe Ser Met Ile
65                  70                  75                  80

ctt tac tta cgt cgc gat ttc aag cga ctg att gac aaa ttt cgt ttg 288
Leu Tyr Leu Arg Arg Asp Phe Lys Arg Leu Ile Asp Lys Phe Arg Leu
                85                  90                  95

ctc atg tcg aat gag gcg gaa cag ggc gag gaa tac gcc gag att ctc 336
Leu Met Ser Asn Glu Ala Glu Gln Gly Glu Glu Tyr Ala Glu Ile Leu
            100                 105                 110

aac gca gca aac aag cag gat caa cga atg tgc act ctg ttt agg act 384
Asn Ala Ala Asn Lys Gln Asp Gln Arg Met Cys Thr Leu Phe Arg Thr
        115                 120                 125

tgt ttc ctc ctc gcc tgg gcc ttg aat agt gtt ctg ccc ctc gtg aga 432
Cys Phe Leu Leu Ala Trp Ala Leu Asn Ser Val Leu Pro Leu Val Arg
    130                 135                 140

atg ggt ctc agc tat tgg tta gca ggt cat gca gag ccc gag ttg cct 480

```
Met Gly Leu Ser Tyr Trp Leu Ala Gly His Ala Glu Pro Glu Leu Pro
145                 150                 155                 160

ttt ccc tgt ctt ttt ccc tgg aat atc cac atc att cgc aat tat gtt   528
Phe Pro Cys Leu Phe Pro Trp Asn Ile His Ile Ile Arg Asn Tyr Val
                165                 170                 175

ttg agc ttc atc tgg agc gct ttc gcc tcg aca ggt gtg gtt tta cct   576
Leu Ser Phe Ile Trp Ser Ala Phe Ala Ser Thr Gly Val Val Leu Pro
            180                 185                 190

gct gtc agc ttg gat acc ata ttc tgt tcc ttc acc agc aac ctg tgc   624
Ala Val Ser Leu Asp Thr Ile Phe Cys Ser Phe Thr Ser Asn Leu Cys
        195                 200                 205

gcc ttc ttc aaa att gcg cag tac aag gtg gtt aga ttt aag ggc gga   672
Ala Phe Phe Lys Ile Ala Gln Tyr Lys Val Val Arg Phe Lys Gly Gly
    210                 215                 220

tcc ctt aaa gaa tca cag gcc aca ttg aac aaa gtc ttt gcc ctg tac   720
Ser Leu Lys Glu Ser Gln Ala Thr Leu Asn Lys Val Phe Ala Leu Tyr
225                 230                 235                 240

cag acc agc ttg gat atg tgc aac gat ctg aat cag tgc tac caa ccg   768
Gln Thr Ser Leu Asp Met Cys Asn Asp Leu Asn Gln Cys Tyr Gln Pro
                245                 250                 255

att atc tgc gcc cag ttc ttc att tca tct ctg caa ctc tgc atg ctg   816
Ile Ile Cys Ala Gln Phe Phe Ile Ser Ser Leu Gln Leu Cys Met Leu
            260                 265                 270

gga tat ctg ttc tcc att act ttt gcc cag aca gag ggc gtc tac tat   864
Gly Tyr Leu Phe Ser Ile Thr Phe Ala Gln Thr Glu Gly Val Tyr Tyr
        275                 280                 285

gcc tca ttc ata gcc aca atc att ata caa gcc tat atc tac tgc tac   912
Ala Ser Phe Ile Ala Thr Ile Ile Ile Gln Ala Tyr Ile Tyr Cys Tyr
    290                 295                 300

tgc ggg gag aac ctg aag acg gag agt gcc agc ttc gag tgg gcc atc   960
Cys Gly Glu Asn Leu Lys Thr Glu Ser Ala Ser Phe Glu Trp Ala Ile
305                 310                 315                 320

tac gac agt ccg tgg cac gag agt ttg ggt gct ggt gga gcc tct acc   1008
Tyr Asp Ser Pro Trp His Glu Ser Leu Gly Ala Gly Gly Ala Ser Thr
                325                 330                 335

tcg atc tgc cga tcc ttg ctg atc agc atg atg cgg gct cat cgg gga   1056
```

```
Ser Ile Cys Arg Ser Leu Leu Ile Ser Met Met Arg Ala His Arg Gly
            340                 345                 350

ttc cgc att acg gga tac ttt ttc gag gca aac atg gag gcc ttc tca   1104
Phe Arg Ile Thr Gly Tyr Phe Phe Glu Ala Asn Met Glu Ala Phe Ser
        355                 360                 365

tcg att gtt cgc acg gcg atg tcc tac atc aca atg ctg aga tca ttc   1152
Ser Ile Val Arg Thr Ala Met Ser Tyr Ile Thr Met Leu Arg Ser Phe
    370                 375                 380

tcc taa                                                          1158
Ser
385
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<210> 24
<211> 385
<212> PRT
<213> Drosophila melanogaster

<400> 24

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Met Asp Ser Phe Leu Gln Val Gln Lys Ser Thr Ile Ala Leu Leu Gly
  1               5                  10                  15

Phe Asp Leu Phe Ser Glu Asn Arg Glu Met Trp Lys Arg Pro Tyr Arg
             20                  25                  30

Ala Met Asn Val Phe Ser Ile Ala Ala Ile Phe Pro Phe Ile Leu Ala
         35                  40                  45

Ala Val Leu His Asn Trp Lys Asn Val Leu Leu Leu Ala Asp Ala Met
     50                  55                  60

Val Ala Leu Leu Ile Thr Ile Leu Gly Leu Phe Lys Phe Ser Met Ile
 65                  70                  75                  80

Leu Tyr Leu Arg Arg Asp Phe Lys Arg Leu Ile Asp Lys Phe Arg Leu
                 85                  90                  95

Leu Met Ser Asn Glu Ala Glu Gln Gly Glu Glu Tyr Ala Glu Ile Leu
            100                 105                 110

Asn Ala Ala Asn Lys Gln Asp Gln Arg Met Cys Thr Leu Phe Arg Thr
        115                 120                 125

Cys Phe Leu Leu Ala Trp Ala Leu Asn Ser Val Leu Pro Leu Val Arg
    130                 135                 140
```

```
Met Gly Leu Ser Tyr Trp Leu Ala Gly His Ala Glu Pro Glu Leu Pro
145                 150                 155                 160

Phe Pro Cys Leu Phe Pro Trp Asn Ile His Ile Ile Arg Asn Tyr Val
                165                 170                 175

Leu Ser Phe Ile Trp Ser Ala Phe Ala Ser Thr Gly Val Val Leu Pro
            180                 185                 190

Ala Val Ser Leu Asp Thr Ile Phe Cys Ser Phe Thr Ser Asn Leu Cys
        195                 200                 205

Ala Phe Phe Lys Ile Ala Gln Tyr Lys Val Val Arg Phe Lys Gly Gly
    210                 215                 220

Ser Leu Lys Glu Ser Gln Ala Thr Leu Asn Lys Val Phe Ala Leu Tyr
225                 230                 235                 240

Gln Thr Ser Leu Asp Met Cys Asn Asp Leu Asn Gln Cys Tyr Gln Pro
                245                 250                 255

Ile Ile Cys Ala Gln Phe Phe Ile Ser Ser Leu Gln Leu Cys Met Leu
            260                 265                 270

Gly Tyr Leu Phe Ser Ile Thr Phe Ala Gln Thr Glu Gly Val Tyr Tyr
        275                 280                 285

Ala Ser Phe Ile Ala Thr Ile Ile Ile Gln Ala Tyr Ile Tyr Cys Tyr
    290                 295                 300

Cys Gly Glu Asn Leu Lys Thr Glu Ser Ala Ser Phe Glu Trp Ala Ile
305                 310                 315                 320

Tyr Asp Ser Pro Trp His Glu Ser Leu Gly Ala Gly Gly Ala Ser Thr
                325                 330                 335

Ser Ile Cys Arg Ser Leu Leu Ile Ser Met Met Arg Ala His Arg Gly
            340                 345                 350

Phe Arg Ile Thr Gly Tyr Phe Phe Glu Ala Asn Met Glu Ala Phe Ser
        355                 360                 365

Ser Ile Val Arg Thr Ala Met Ser Tyr Ile Thr Met Leu Arg Ser Phe
    370                 375                 380

Ser
385
```

<210> 25
<211> 1203
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1200)
<223> DOR 47E.2, a coding region on BDGP Clone No.
AC005638

<400> 25
atg aac gac tcg ggt tat caa tca aat ctc agc ctt ctg cgg gtt ttt 48
Met Asn Asp Ser Gly Tyr Gln Ser Asn Leu Ser Leu Leu Arg Val Phe
1 5 10 15

ctc gac gag ttc cga tcg gtt ctg cgg cag gaa agt ccc ggt ctc atc 96
Leu Asp Glu Phe Arg Ser Val Leu Arg Gln Glu Ser Pro Gly Leu Ile
20 25 30

cca cgc ctg gct ttt tac tat gtt cgc gcc ttt ctg agc ttg ccc ctg 144
Pro Arg Leu Ala Phe Tyr Tyr Val Arg Ala Phe Leu Ser Leu Pro Leu
35 40 45

tac cga tgg atc aac ttg ttc atc atg tgc aat gtg atg acc att ttc 192
Tyr Arg Trp Ile Asn Leu Phe Ile Met Cys Asn Val Met Thr Ile Phe
50 55 60

tgg acc atg ttc gtg gcc ctg ccc gag tcg aag aac gtg atc gaa atg 240
Trp Thr Met Phe Val Ala Leu Pro Glu Ser Lys Asn Val Ile Glu Met
65 70 75 80

ggc gac gac ttg gtt tgg att tcg ggg atg gca ctg gtg ttc acc aag 288
Gly Asp Asp Leu Val Trp Ile Ser Gly Met Ala Leu Val Phe Thr Lys
85 90 95

atc ttt tac atg cat ttg cgt tgc gac gag atc gat gaa ctt att tcg 336
Ile Phe Tyr Met His Leu Arg Cys Asp Glu Ile Asp Glu Leu Ile Ser
100 105 110

gat ttt gaa tac tac aac cgg gag ctg aga ccc cat aat atc gat gag 384
Asp Phe Glu Tyr Tyr Asn Arg Glu Leu Arg Pro His Asn Ile Asp Glu
115 120 125

gag gtg ttg ggt tgg cag aga ctg tgc tac gtg ata gaa tcg ggt cta 432

```
Glu Val Leu Gly Trp Gln Arg Leu Cys Tyr Val Ile Glu Ser Gly Leu
    130                 135                 140

tat atc aac tgc ttt tgc ctg gtc aac ttc ttc agt gcc gct att ttc   480
Tyr Ile Asn Cys Phe Cys Leu Val Asn Phe Phe Ser Ala Ala Ile Phe
145                 150                 155                 160

ctg caa cct ctg ttg ggc gag gga aag ctg ccc ttc cac agc gtc tat   528
Leu Gln Pro Leu Leu Gly Glu Gly Lys Leu Pro Phe His Ser Val Tyr
                165                 170                 175

ccg ttt caa tgg cat cgc ttg gat ctg cat ccc tac acg ttc tgg ttc   576
Pro Phe Gln Trp His Arg Leu Asp Leu His Pro Tyr Thr Phe Trp Phe
            180                 185                 190

ctc tac atc tgg cag agt ctg acc tcg cag cac aac cta atg agc att   624
Leu Tyr Ile Trp Gln Ser Leu Thr Ser Gln His Asn Leu Met Ser Ile
        195                 200                 205

cta atg gtg gat atg gta ggc att tcc acg ttc ctc cag acg gcg ctc   672
Leu Met Val Asp Met Val Gly Ile Ser Thr Phe Leu Gln Thr Ala Leu
    210                 215                 220

aat ctc aag ttg ctt tgc atc gag ata agg aaa ctg ggg gac atg gag   720
Asn Leu Lys Leu Leu Cys Ile Glu Ile Arg Lys Leu Gly Asp Met Glu
225                 230                 235                 240

gtc agt gat aag agg ttc cac gag gag ttt tgt cgt gtg gtt cgc ttc   768
Val Ser Asp Lys Arg Phe His Glu Glu Phe Cys Arg Val Val Arg Phe
                245                 250                 255

cac cag cac att atc aaa ttg gtg ggg aaa gcc aat aga gct ttc aat   816
His Gln His Ile Ile Lys Leu Val Gly Lys Ala Asn Arg Ala Phe Asn
            260                 265                 270

ggc gcc ttc aat gca caa tta atg gcc agt ttc tcc ctg att tcc ata   864
Gly Ala Phe Asn Ala Gln Leu Met Ala Ser Phe Ser Leu Ile Ser Ile
        275                 280                 285

tcc act ttc gag acc atg gct gca gcg gct gtg gat ccc aaa atg gcc   912
Ser Thr Phe Glu Thr Met Ala Ala Ala Ala Val Asp Pro Lys Met Ala
    290                 295                 300

gcc aag ttc gtg ctt ctc atg ctg gtg gca ttc att caa ctg tcg ctt   960
Ala Lys Phe Val Leu Leu Met Leu Val Ala Phe Ile Gln Leu Ser Leu
305                 310                 315                 320

tgg tgc gtc tct gga act ttg gtt tat act cag tca gtg gag gtg gct   1008
```

```
Trp Cys Val Ser Gly Thr Leu Val Tyr Thr Gln Ser Val Glu Val Ala
                325                 330                 335

cag gct gct ttt gat atc aac gat tgg cac acc aaa tcg cca ggc atc   1056
Gln Ala Ala Phe Asp Ile Asn Asp Trp His Thr Lys Ser Pro Gly Ile
            340                 345                 350

cag agg gat ata tcc ttt gtg ata cta cga gcc cag aaa ccc ctg atg   1104
Gln Arg Asp Ile Ser Phe Val Ile Leu Arg Ala Gln Lys Pro Leu Met
        355                 360                 365

tat gtg gcc gaa cca ttt ctg ccc ttc acc ctg gga acc tat atg ctt   1152
Tyr Val Ala Glu Pro Phe Leu Pro Phe Thr Leu Gly Thr Tyr Met Leu
    370                 375                 380

gtt ctg aag aac tgc tat cgt ttg ctg gcc ctg atg caa gaa tcg atg   1200
Val Leu Lys Asn Cys Tyr Arg Leu Leu Ala Leu Met Gln Glu Ser Met
385                 390                 395                 400

tag                                                             1203


<210> 26
<211> 400
<212> PRT
<213> Drosophila melanogaster

<400> 26
Met Asn Asp Ser Gly Tyr Gln Ser Asn Leu Ser Leu Leu Arg Val Phe
  1               5                  10                  15

Leu Asp Glu Phe Arg Ser Val Leu Arg Gln Glu Ser Pro Gly Leu Ile
            20                  25                  30

Pro Arg Leu Ala Phe Tyr Tyr Val Arg Ala Phe Leu Ser Leu Pro Leu
        35                  40                  45

Tyr Arg Trp Ile Asn Leu Phe Ile Met Cys Asn Val Met Thr Ile Phe
    50                  55                  60

Trp Thr Met Phe Val Ala Leu Pro Glu Ser Lys Asn Val Ile Glu Met
65                  70                  75                  80

Gly Asp Asp Leu Val Trp Ile Ser Gly Met Ala Leu Val Phe Thr Lys
                85                  90                  95

Ile Phe Tyr Met His Leu Arg Cys Asp Glu Ile Asp Glu Leu Ile Ser
            100                 105                 110
```

```
Asp Phe Glu Tyr Tyr Asn Arg Glu Leu Arg Pro His Asn Ile Asp Glu
        115                 120                 125

Glu Val Leu Gly Trp Gln Arg Leu Cys Tyr Val Ile Glu Ser Gly Leu
    130                 135                 140

Tyr Ile Asn Cys Phe Cys Leu Val Asn Phe Phe Ser Ala Ala Ile Phe
145                 150                 155                 160

Leu Gln Pro Leu Leu Gly Glu Gly Lys Leu Pro Phe His Ser Val Tyr
            165                 170                 175

Pro Phe Gln Trp His Arg Leu Asp Leu His Pro Tyr Thr Phe Trp Phe
            180                 185                 190

Leu Tyr Ile Trp Gln Ser Leu Thr Ser Gln His Asn Leu Met Ser Ile
        195                 200                 205

Leu Met Val Asp Met Val Gly Ile Ser Thr Phe Leu Gln Thr Ala Leu
    210                 215                 220

Asn Leu Lys Leu Leu Cys Ile Glu Ile Arg Lys Leu Gly Asp Met Glu
225                 230                 235                 240

Val Ser Asp Lys Arg Phe His Glu Glu Phe Cys Arg Val Val Arg Phe
                245                 250                 255

His Gln His Ile Ile Lys Leu Val Gly Lys Ala Asn Arg Ala Phe Asn
            260                 265                 270

Gly Ala Phe Asn Ala Gln Leu Met Ala Ser Phe Ser Leu Ile Ser Ile
        275                 280                 285

Ser Thr Phe Glu Thr Met Ala Ala Ala Ala Val Asp Pro Lys Met Ala
    290                 295                 300

Ala Lys Phe Val Leu Leu Met Leu Val Ala Phe Ile Gln Leu Ser Leu
305                 310                 315                 320

Trp Cys Val Ser Gly Thr Leu Val Tyr Thr Gln Ser Val Glu Val Ala
                325                 330                 335

Gln Ala Ala Phe Asp Ile Asn Asp Trp His Thr Lys Ser Pro Gly Ile
            340                 345                 350

Gln Arg Asp Ile Ser Phe Val Ile Leu Arg Ala Gln Lys Pro Leu Met
        355                 360                 365
```

```
Tyr Val Ala Glu Pro Phe Leu Pro Phe Thr Leu Gly Thr Tyr Met Leu
    370                 375                 380

Val Leu Lys Asn Cys Tyr Arg Leu Leu Ala Leu Met Gln Glu Ser Met
385                 390                 395                 400
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<210> 27
<211> 1140
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1137)
<223> DOR 59D.1, a coding region on BDGP Clone No. AC005672

<400> 27

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atg gca gag gtc aga gtg gac agt ctg gag ttt ttc aag agc cat tgg   48
Met Ala Glu Val Arg Val Asp Ser Leu Glu Phe Phe Lys Ser His Trp
  1               5                  10                  15

acc gcc tgg cgg tac ttg gga gtg gct cat ttt cgg gtc gag aac tgg   96
Thr Ala Trp Arg Tyr Leu Gly Val Ala His Phe Arg Val Glu Asn Trp
             20                  25                  30

aag aac ctt tac gtg ttt tac agc att gtg tcg aat ctt ctc gtg acc   144
Lys Asn Leu Tyr Val Phe Tyr Ser Ile Val Ser Asn Leu Leu Val Thr
         35                  40                  45

ctg tgc tac ccc gtt cac ctg gga ata tcc ctc ttt cgc aac cgc acc   192
Leu Cys Tyr Pro Val His Leu Gly Ile Ser Leu Phe Arg Asn Arg Thr
     50                  55                  60

atc acc gag gac atc ctc aac ctg acc acc ttt gcg acc tgc aca gcc   240
Ile Thr Glu Asp Ile Leu Asn Leu Thr Thr Phe Ala Thr Cys Thr Ala
 65                  70                  75                  80

tgt tcg gtg aag tgc ctg ctc tac gcc tac aac atc aag gat gtg ctg   288
Cys Ser Val Lys Cys Leu Leu Tyr Ala Tyr Asn Ile Lys Asp Val Leu
                 85                  90                  95

gag atg gag cgg ctg ttg agg ctt ttg gat gaa cgc gtc gtg ggt ccg   336
Glu Met Glu Arg Leu Leu Arg Leu Leu Asp Glu Arg Val Val Gly Pro
            100                 105                 110
```

```
gag caa cgc agc atc tac gga caa gtg agg gtc cag ctg cga aat gtg   384
Glu Gln Arg Ser Ile Tyr Gly Gln Val Arg Val Gln Leu Arg Asn Val
        115                 120                 125

cta tac gtg ttc atc ggc atc tac atg ccg tgt gcc ctg ttc gcc gag   432
Leu Tyr Val Phe Ile Gly Ile Tyr Met Pro Cys Ala Leu Phe Ala Glu
    130                 135                 140

cta tcc ttt ctg ttc aag gag gag cgc ggt ctg atg tat ccc gcc tgg   480
Leu Ser Phe Leu Phe Lys Glu Glu Arg Gly Leu Met Tyr Pro Ala Trp
145                 150                 155                 160

ttt ccc ttc gac tgg ctg cac tcc acc agg aac tat tac ata gcg aac   528
Phe Pro Phe Asp Trp Leu His Ser Thr Arg Asn Tyr Tyr Ile Ala Asn
                165                 170                 175

gcc tat cag ata gtg ggc atc tcg ttt cag ctg ctg caa aac tat gtt   576
Ala Tyr Gln Ile Val Gly Ile Ser Phe Gln Leu Leu Gln Asn Tyr Val
            180                 185                 190

agc gac tgc ttt ccg gcg gtg gtg ctg tgc ctg atc tca tcc cac atc   624
Ser Asp Cys Phe Pro Ala Val Val Leu Cys Leu Ile Ser Ser His Ile
        195                 200                 205

aaa atg ttg tac aac aga ttc gag gag gtg ggc ctg gat cca gcc aga   672
Lys Met Leu Tyr Asn Arg Phe Glu Glu Val Gly Leu Asp Pro Ala Arg
    210                 215                 220

gat gcg gag aag gac ctg gag gcc tgc atc acc gat cac aag cat att   720
Asp Ala Glu Lys Asp Leu Glu Ala Cys Ile Thr Asp His Lys His Ile
225                 230                 235                 240

cta gaa cta ttc cga cgc atc gag gcc ttc att tcc ctg ccc atg cta   768
Leu Glu Leu Phe Arg Arg Ile Glu Ala Phe Ile Ser Leu Pro Met Leu
                245                 250                 255

att cag ttc aca gtg acc gcc ttg aat gtg tgc atc ggt tta gca gcc   816
Ile Gln Phe Thr Val Thr Ala Leu Asn Val Cys Ile Gly Leu Ala Ala
            260                 265                 270

ctg gtg ttt ttc gtc agc gag ccc atg gca cgg atg tac ttc atc ttc   864
Leu Val Phe Phe Val Ser Glu Pro Met Ala Arg Met Tyr Phe Ile Phe
        275                 280                 285

tac tcc ctg gcc atg ccg ctg cag atc ttt ccg tcc tgc ttt ttc ggc   912
Tyr Ser Leu Ala Met Pro Leu Gln Ile Phe Pro Ser Cys Phe Phe Gly
    290                 295                 300
```

```
acc gac aac gag tac tgg ttc gga cgc ctc cac tac gcg gcc ttc agt   960
Thr Asp Asn Glu Tyr Trp Phe Gly Arg Leu His Tyr Ala Ala Phe Ser
305                 310                 315                 320

tgc aat tgg cac aca cag aac agg agc ttt aag cgg aaa atg atg ctg   1008
Cys Asn Trp His Thr Gln Asn Arg Ser Phe Lys Arg Lys Met Met Leu
                325                 330                 335

ttc gtt gag caa tcg ttg aag aag agc acc gct gtg gct ggc gga atg   1056
Phe Val Glu Gln Ser Leu Lys Lys Ser Thr Ala Val Ala Gly Gly Met
            340                 345                 350

atg cgt atc cac ctg gac acg ttc ttt tcc acc cta aag ggg gcc tac   1104
Met Arg Ile His Leu Asp Thr Phe Phe Ser Thr Leu Lys Gly Ala Tyr
        355                 360                 365

tcc ctc ttt acc atc att att cgg atg aga aag tag                  1140
Ser Leu Phe Thr Ile Ile Ile Arg Met Arg Lys
    370                 375
```

<210> 28
<211> 379
<212> PRT
<213> Drosophila melanogaster

<400> 28

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Met Ala Glu Val Arg Val Asp Ser Leu Glu Phe Phe Lys Ser His Trp
  1               5                  10                  15

Thr Ala Trp Arg Tyr Leu Gly Val Ala His Phe Arg Val Glu Asn Trp
             20                  25                  30

Lys Asn Leu Tyr Val Phe Tyr Ser Ile Val Ser Asn Leu Leu Val Thr
         35                  40                  45

Leu Cys Tyr Pro Val His Leu Gly Ile Ser Leu Phe Arg Asn Arg Thr
     50                  55                  60

Ile Thr Glu Asp Ile Leu Asn Leu Thr Thr Phe Ala Thr Cys Thr Ala
 65                  70                  75                  80

Cys Ser Val Lys Cys Leu Leu Tyr Ala Tyr Asn Ile Lys Asp Val Leu
                 85                  90                  95

Glu Met Glu Arg Leu Leu Arg Leu Leu Asp Glu Arg Val Val Gly Pro
            100                 105                 110
```

```
Glu Gln Arg Ser Ile Tyr Gly Gln Val Arg Val Gln Leu Arg Asn Val
        115                 120                 125

Leu Tyr Val Phe Ile Gly Ile Tyr Met Pro Cys Ala Leu Phe Ala Glu
    130                 135                 140

Leu Ser Phe Leu Phe Lys Glu Glu Arg Gly Leu Met Tyr Pro Ala Trp
145                 150                 155                 160

Phe Pro Phe Asp Trp Leu His Ser Thr Arg Asn Tyr Tyr Ile Ala Asn
                165                 170                 175

Ala Tyr Gln Ile Val Gly Ile Ser Phe Gln Leu Leu Gln Asn Tyr Val
            180                 185                 190

Ser Asp Cys Phe Pro Ala Val Val Leu Cys Leu Ile Ser Ser His Ile
        195                 200                 205

Lys Met Leu Tyr Asn Arg Phe Glu Glu Val Gly Leu Asp Pro Ala Arg
    210                 215                 220

Asp Ala Glu Lys Asp Leu Glu Ala Cys Ile Thr Asp His Lys His Ile
225                 230                 235                 240

Leu Glu Leu Phe Arg Arg Ile Glu Ala Phe Ile Ser Leu Pro Met Leu
                245                 250                 255

Ile Gln Phe Thr Val Thr Ala Leu Asn Val Cys Ile Gly Leu Ala Ala
            260                 265                 270

Leu Val Phe Phe Val Ser Glu Pro Met Ala Arg Met Tyr Phe Ile Phe
        275                 280                 285

Tyr Ser Leu Ala Met Pro Leu Gln Ile Phe Pro Ser Cys Phe Phe Gly
    290                 295                 300

Thr Asp Asn Glu Tyr Trp Phe Gly Arg Leu His Tyr Ala Ala Phe Ser
305                 310                 315                 320

Cys Asn Trp His Thr Gln Asn Arg Ser Phe Lys Arg Lys Met Met Leu
                325                 330                 335

Phe Val Glu Gln Ser Leu Lys Lys Ser Thr Ala Val Ala Gly Gly Met
            340                 345                 350

Met Arg Ile His Leu Asp Thr Phe Phe Ser Thr Leu Lys Gly Ala Tyr
        355                 360                 365
```

```
Ser Leu Phe Thr Ile Ile Ile Arg Met Arg Lys
    370                 375


<210> 29
<211> 1194
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1194)
<223> DOR 2F.1, coding region of NCBI Accession No.
      AL009195

<400> 29
atg gag aag caa gag gat ttc aaa ctg aac acc cac agt gct gtg tac   48
Met Glu Lys Gln Glu Asp Phe Lys Leu Asn Thr His Ser Ala Val Tyr
  1               5                  10                  15

tac cac tgg cgc gtt tgg gag ctc act ggc ctg atg cgt cct ccg ggc   96
Tyr His Trp Arg Val Trp Glu Leu Thr Gly Leu Met Arg Pro Pro Gly
             20                  25                  30

gtt tca agc ctg ctt tac gtg gta tac tcc att acg gtc aac ttg gtg   144
Val Ser Ser Leu Leu Tyr Val Val Tyr Ser Ile Thr Val Asn Leu Val
         35                  40                  45

gtc acc gtg ctg ttt ccc ttg agc ttg ctg gcc agg ctg ctg ttc acc   192
Val Thr Val Leu Phe Pro Leu Ser Leu Leu Ala Arg Leu Leu Phe Thr
     50                  55                  60

acc aac atg gcc gga ttg tgc gag aac ctg acc ata act att acc gat   240
Thr Asn Met Ala Gly Leu Cys Glu Asn Leu Thr Ile Thr Ile Thr Asp
 65                  70                  75                  80

att gtg gcc aat ttg aag ttt gcg aat gtg tac atg gtg agg aag cag   288
Ile Val Ala Asn Leu Lys Phe Ala Asn Val Tyr Met Val Arg Lys Gln
                 85                  90                  95

ctc cat gag att cgc tct ctc cta agg ctc atg gac gct aga gcc cgg   336
Leu His Glu Ile Arg Ser Leu Leu Arg Leu Met Asp Ala Arg Ala Arg
            100                 105                 110

ctg gtg ggc gat ccc gag gag att tct gcc ttg agg aag gaa gtg aat   384
Leu Val Gly Asp Pro Glu Glu Ile Ser Ala Leu Arg Lys Glu Val Asn
```

```
        115                 120                 125

atc gca cag ggc act ttc cgc acc ttt gcc agt att ttc gta ttt ggc   432
Ile Ala Gln Gly Thr Phe Arg Thr Phe Ala Ser Ile Phe Val Phe Gly
    130                 135                 140

act act ttg agt tgc gtc cgc gtg gtc gtt cgc cca gat cga gag ctc   480
Thr Thr Leu Ser Cys Val Arg Val Val Val Arg Pro Asp Arg Glu Leu
145                 150                 155                 160

ctg tat ccg gcc tgg ttc ggc gtt gac tgg atg cac tcc acc aga aac   528
Leu Tyr Pro Ala Trp Phe Gly Val Asp Trp Met His Ser Thr Arg Asn
            165                 170                 175

tat gtg ctc atc aat atc tac cag ctc ttc ggc ttg ata gtg cag gct   576
Tyr Val Leu Ile Asn Ile Tyr Gln Leu Phe Gly Leu Ile Val Gln Ala
        180                 185                 190

ata cag aac tgc gct agt gac tcc tat ccg cct gcg ttt ctc tgc ctg   624
Ile Gln Asn Cys Ala Ser Asp Ser Tyr Pro Pro Ala Phe Leu Cys Leu
    195                 200                 205

ctc acg ggt cat atg cgt gct ttg gag ctg agg gtg cgg cgg att ggc   672
Leu Thr Gly His Met Arg Ala Leu Glu Leu Arg Val Arg Arg Ile Gly
210                 215                 220

tgc agg acg gaa aag tcc aat aaa ggg cag aca tat gaa gcc tgg cgg   720
Cys Arg Thr Glu Lys Ser Asn Lys Gly Gln Thr Tyr Glu Ala Trp Arg
225                 230                 235                 240

gag gag gtg tac cag gaa ctc atc gag tgc atc cgc gat ctg gcg cgg   768
Glu Glu Val Tyr Gln Glu Leu Ile Glu Cys Ile Arg Asp Leu Ala Arg
                245                 250                 255

gtc cat cgg ctg agg gag atc att cag cgg gtc ctt tca gtg ccc tgc   816
Val His Arg Leu Arg Glu Ile Ile Gln Arg Val Leu Ser Val Pro Cys
            260                 265                 270

atg gcc cag ttc gtc tgc tcc gcc gcc gtc cag tgt acc gtc gcc atg   864
Met Ala Gln Phe Val Cys Ser Ala Ala Val Gln Cys Thr Val Ala Met
        275                 280                 285

cac ttc ctg tac gta gcg gat gac cac gac cac acc gcc atg atc atc   912
His Phe Leu Tyr Val Ala Asp Asp His Asp His Thr Ala Met Ile Ile
    290                 295                 300

tcg att gta ttt ttc tcg gcc gtc acc ttg gag gtg ttt gta atc tgc   960
Ser Ile Val Phe Phe Ser Ala Val Thr Leu Glu Val Phe Val Ile Cys
```

```
305                 310                 315                 320

tat ttt ggg gac agg atg cgg aca cag agc gag gcg ctg tgc gat gcc   1008
Tyr Phe Gly Asp Arg Met Arg Thr Gln Ser Glu Ala Leu Cys Asp Ala
                325                 330                 335

ttc tac gat tgc aac tgg ata gaa cag ctg ccc aag ttc aag cgc gaa   1056
Phe Tyr Asp Cys Asn Trp Ile Glu Gln Leu Pro Lys Phe Lys Arg Glu
            340                 345                 350

ctg ctc ttc acc ctg gcc agg acg cag cgg cct tct ctt atc tac gca   1104
Leu Leu Phe Thr Leu Ala Arg Thr Gln Arg Pro Ser Leu Ile Tyr Ala
        355                 360                 365

ggc aac tac atc gca ctc tcg ctg gag acc ttc gag cag cag gtc atg   1152
Gly Asn Tyr Ile Ala Leu Ser Leu Glu Thr Phe Glu Gln Gln Val Met
    370                 375                 380

agg ttc aca tac tct gtt ttc aca ctc ttg ctg agg gcc aag          1194
Arg Phe Thr Tyr Ser Val Phe Thr Leu Leu Leu Arg Ala Lys
385                 390                 395
```

<210> 30
<211> 398
<212> PRT
<213> Drosophila melanogaster

<400> 30

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Met Glu Lys Gln Glu Asp Phe Lys Leu Asn Thr His Ser Ala Val Tyr
  1               5                  10                  15

Tyr His Trp Arg Val Trp Glu Leu Thr Gly Leu Met Arg Pro Pro Gly
             20                  25                  30

Val Ser Ser Leu Leu Tyr Val Val Tyr Ser Ile Thr Val Asn Leu Val
         35                  40                  45

Val Thr Val Leu Phe Pro Leu Ser Leu Leu Ala Arg Leu Leu Phe Thr
     50                  55                  60

Thr Asn Met Ala Gly Leu Cys Glu Asn Leu Thr Ile Thr Ile Thr Asp
 65                  70                  75                  80

Ile Val Ala Asn Leu Lys Phe Ala Asn Val Tyr Met Val Arg Lys Gln
                 85                  90                  95

Leu His Glu Ile Arg Ser Leu Leu Arg Leu Met Asp Ala Arg Ala Arg
```

```
            100                 105                 110

Leu Val Gly Asp Pro Glu Glu Ile Ser Ala Leu Arg Lys Glu Val Asn
        115                 120                 125

Ile Ala Gln Gly Thr Phe Arg Thr Phe Ala Ser Ile Phe Val Phe Gly
    130                 135                 140

Thr Thr Leu Ser Cys Val Arg Val Val Val Arg Pro Asp Arg Glu Leu
145                 150                 155                 160

Leu Tyr Pro Ala Trp Phe Gly Val Asp Trp Met His Ser Thr Arg Asn
                165                 170                 175

Tyr Val Leu Ile Asn Ile Tyr Gln Leu Phe Gly Leu Ile Val Gln Ala
            180                 185                 190

Ile Gln Asn Cys Ala Ser Asp Ser Tyr Pro Pro Ala Phe Leu Cys Leu
        195                 200                 205

Leu Thr Gly His Met Arg Ala Leu Glu Leu Arg Val Arg Arg Ile Gly
    210                 215                 220

Cys Arg Thr Glu Lys Ser Asn Lys Gly Gln Thr Tyr Glu Ala Trp Arg
225                 230                 235                 240

Glu Glu Val Tyr Gln Glu Leu Ile Glu Cys Ile Arg Asp Leu Ala Arg
                245                 250                 255

Val His Arg Leu Arg Glu Ile Ile Gln Arg Val Leu Ser Val Pro Cys
            260                 265                 270

Met Ala Gln Phe Val Cys Ser Ala Ala Val Gln Cys Thr Val Ala Met
        275                 280                 285

His Phe Leu Tyr Val Ala Asp Asp His Asp His Thr Ala Met Ile Ile
    290                 295                 300

Ser Ile Val Phe Phe Ser Ala Val Thr Leu Glu Val Phe Val Ile Cys
305                 310                 315                 320

Tyr Phe Gly Asp Arg Met Arg Thr Gln Ser Glu Ala Leu Cys Asp Ala
                325                 330                 335

Phe Tyr Asp Cys Asn Trp Ile Glu Gln Leu Pro Lys Phe Lys Arg Glu
            340                 345                 350

Leu Leu Phe Thr Leu Ala Arg Thr Gln Arg Pro Ser Leu Ile Tyr Ala
```

```
        355                 360                 365

Gly Asn Tyr Ile Ala Leu Ser Leu Glu Thr Phe Glu Gln Gln Val Met
    370                 375                 380

Arg Phe Thr Tyr Ser Val Phe Thr Leu Leu Leu Arg Ala Lys
385                 390                 395



<210> 31
<211> 1191
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1191)
<223> DOR 22A.1, a coding region of BDGP Clone No.
      AC004121

<400> 31
atg tta agc aag ttt ttt ccc cac ata aaa gaa aag cca ttg agc gag   48
Met Leu Ser Lys Phe Phe Pro His Ile Lys Glu Lys Pro Leu Ser Glu
  1               5                  10                  15

cgg gtt aag tcc cga gat gcc ttc att tac ttg gat cgg gtg atg tgg   96
Arg Val Lys Ser Arg Asp Ala Phe Ile Tyr Leu Asp Arg Val Met Trp
             20                  25                  30

tcc ttt ggc tgg aca gag cct gaa aac aaa agg tgg atc ctt cct tat   144
Ser Phe Gly Trp Thr Glu Pro Glu Asn Lys Arg Trp Ile Leu Pro Tyr
         35                  40                  45

aaa ctg tgg tta gcg ttc gtg aac ata gta atg ctc atc ctt ctg ccg   192
Lys Leu Trp Leu Ala Phe Val Asn Ile Val Met Leu Ile Leu Leu Pro
     50                  55                  60

atc tcg ata agc atc gag tac ctc cac cga ttt aaa acc ttc tcg gcg   240
Ile Ser Ile Ser Ile Glu Tyr Leu His Arg Phe Lys Thr Phe Ser Ala
 65                  70                  75                  80

ggg gag ttc ctt agt tcc ctc gag att gga gtc aac atg tac gga agc   288
Gly Glu Phe Leu Ser Ser Leu Glu Ile Gly Val Asn Met Tyr Gly Ser
                 85                  90                  95

tct ttt aag tgc gcc ttc acc ttg att gga ttc aag aaa aga cag gaa   336
Ser Phe Lys Cys Ala Phe Thr Leu Ile Gly Phe Lys Lys Arg Gln Glu
```

```
            100                 105                 110

gct aag gtt tta ctg gat cag ctg gac aag aga tgc ctt agc gat aag   384
Ala Lys Val Leu Leu Asp Gln Leu Asp Lys Arg Cys Leu Ser Asp Lys
        115                 120                 125

gag agg tcc act gtt cat cgc tat gtc gcc atg gga aac ttt ttc gat   432
Glu Arg Ser Thr Val His Arg Tyr Val Ala Met Gly Asn Phe Phe Asp
    130                 135                 140

att ttg tat cac att ttt tac tcc acc ttc gtg gta atg aac ttc ccg   480
Ile Leu Tyr His Ile Phe Tyr Ser Thr Phe Val Val Met Asn Phe Pro
145                 150                 155                 160

tat ttt ctg ctt gag aga cgc cat gct tgg cgc atg tac ttt cca tat   528
Tyr Phe Leu Leu Glu Arg Arg His Ala Trp Arg Met Tyr Phe Pro Tyr
                165                 170                 175

atc gat tcc gac gaa cag ttt tac atc tcc agc atc gcc gag tgt ttt   576
Ile Asp Ser Asp Glu Gln Phe Tyr Ile Ser Ser Ile Ala Glu Cys Phe
            180                 185                 190

ctg atg acg gag gcc atc tac atg gat ctc tgt acg gac gtg tgt ccc   624
Leu Met Thr Glu Ala Ile Tyr Met Asp Leu Cys Thr Asp Val Cys Pro
        195                 200                 205

ttg atc tcc atg ctt atg gct cga tgc cac att agc ctc ctg aaa cag   672
Leu Ile Ser Met Leu Met Ala Arg Cys His Ile Ser Leu Leu Lys Gln
    210                 215                 220

cga ctg aga aat ctc cga tcg aag cca gga agg acc gaa gat gag tac   720
Arg Leu Arg Asn Leu Arg Ser Lys Pro Gly Arg Thr Glu Asp Glu Tyr
225                 230                 235                 240

ttg gag gag ctc acc gag tgc att cgg gat cat cga ttg cta ttg gac   768
Leu Glu Glu Leu Thr Glu Cys Ile Arg Asp His Arg Leu Leu Leu Asp
                245                 250                 255

tat gtt gac gca ttg cga ccc gtc ttt tcg gga acc att ttt gtg cag   816
Tyr Val Asp Ala Leu Arg Pro Val Phe Ser Gly Thr Ile Phe Val Gln
            260                 265                 270

ttc ctc ctg atc ggt act gta ctg ggt ctc tca atg ata aat cta atg   864
Phe Leu Leu Ile Gly Thr Val Leu Gly Leu Ser Met Ile Asn Leu Met
        275                 280                 285

ttc ttc tcg aca ttt tgg act ggt gtc gcc act tgc ctt ttt atg ttc   912
Phe Phe Ser Thr Phe Trp Thr Gly Val Ala Thr Cys Leu Phe Met Phe
```

```
    290                 295                 300

gac gtg tcc atg gag acg ttc ccc ttt tgc tat ttg tgc aac atg att   960
Asp Val Ser Met Glu Thr Phe Pro Phe Cys Tyr Leu Cys Asn Met Ile
305                 310                 315                 320

atc gat gac tgc cag gaa atg tcc aat tgc ctc ttt caa tcg gac tgg   1008
Ile Asp Asp Cys Gln Glu Met Ser Asn Cys Leu Phe Gln Ser Asp Trp
                325                 330                 335

acc tct gcc gat cgt cgc tac aaa tcc acg ttg gta tac ttt ctt cac   1056
Thr Ser Ala Asp Arg Arg Tyr Lys Ser Thr Leu Val Tyr Phe Leu His
            340                 345                 350

aat ctt cag caa ccc att act ctc acg gct ggt gga gtg ttt cct att   1104
Asn Leu Gln Gln Pro Ile Thr Leu Thr Ala Gly Gly Val Phe Pro Ile
        355                 360                 365

tcc atg caa aca aat ttg gct atg gtg aag ctg gca ttt tct gtg gtt   1152
Ser Met Gln Thr Asn Leu Ala Met Val Lys Leu Ala Phe Ser Val Val
    370                 375                 380

acg gta att aag caa ttt aac ttg gcc gaa agg ttt caa               1191
Thr Val Ile Lys Gln Phe Asn Leu Ala Glu Arg Phe Gln
385                 390                 395
```

<210> 32
<211> 397
<212> PRT
<213> Drosophila melanogaster

<400> 32

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Met Leu Ser Lys Phe Phe Pro His Ile Lys Glu Lys Pro Leu Ser Glu
  1               5                  10                  15

Arg Val Lys Ser Arg Asp Ala Phe Ile Tyr Leu Asp Arg Val Met Trp
             20                  25                  30

Ser Phe Gly Trp Thr Glu Pro Glu Asn Lys Arg Trp Ile Leu Pro Tyr
         35                  40                  45

Lys Leu Trp Leu Ala Phe Val Asn Ile Val Met Leu Ile Leu Leu Pro
     50                  55                  60

Ile Ser Ile Ser Ile Glu Tyr Leu His Arg Phe Lys Thr Phe Ser Ala
 65                  70                  75                  80
```

```
Gly Glu Phe Leu Ser Ser Leu Glu Ile Gly Val Asn Met Tyr Gly Ser
                 85                  90                  95

Ser Phe Lys Cys Ala Phe Thr Leu Ile Gly Phe Lys Lys Arg Gln Glu
            100                 105                 110

Ala Lys Val Leu Leu Asp Gln Leu Asp Lys Arg Cys Leu Ser Asp Lys
        115                 120                 125

Glu Arg Ser Thr Val His Arg Tyr Val Ala Met Gly Asn Phe Phe Asp
    130                 135                 140

Ile Leu Tyr His Ile Phe Tyr Ser Thr Phe Val Val Met Asn Phe Pro
145                 150                 155                 160

Tyr Phe Leu Leu Glu Arg Arg His Ala Trp Arg Met Tyr Phe Pro Tyr
                165                 170                 175

Ile Asp Ser Asp Glu Gln Phe Tyr Ile Ser Ser Ile Ala Glu Cys Phe
            180                 185                 190

Leu Met Thr Glu Ala Ile Tyr Met Asp Leu Cys Thr Asp Val Cys Pro
        195                 200                 205

Leu Ile Ser Met Leu Met Ala Arg Cys His Ile Ser Leu Leu Lys Gln
    210                 215                 220

Arg Leu Arg Asn Leu Arg Ser Lys Pro Gly Arg Thr Glu Asp Glu Tyr
225                 230                 235                 240

Leu Glu Glu Leu Thr Glu Cys Ile Arg Asp His Arg Leu Leu Leu Asp
                245                 250                 255

Tyr Val Asp Ala Leu Arg Pro Val Phe Ser Gly Thr Ile Phe Val Gln
            260                 265                 270

Phe Leu Leu Ile Gly Thr Val Leu Gly Leu Ser Met Ile Asn Leu Met
        275                 280                 285

Phe Phe Ser Thr Phe Trp Thr Gly Val Ala Thr Cys Leu Phe Met Phe
    290                 295                 300

Asp Val Ser Met Glu Thr Phe Pro Phe Cys Tyr Leu Cys Asn Met Ile
305                 310                 315                 320

Ile Asp Asp Cys Gln Glu Met Ser Asn Cys Leu Phe Gln Ser Asp Trp
                325                 330                 335
```

```
Thr Ser Ala Asp Arg Arg Tyr Lys Ser Thr Leu Val Tyr Phe Leu His
            340                 345                 350

Asn Leu Gln Gln Pro Ile Thr Leu Thr Ala Gly Gly Val Phe Pro Ile
        355                 360                 365

Ser Met Gln Thr Asn Leu Ala Met Val Lys Leu Ala Phe Ser Val Val
    370                 375                 380

Thr Val Ile Lys Gln Phe Asn Leu Ala Glu Arg Phe Gln
385                 390                 395
```

<210> 33
<211> 1200
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1200)
<223> DOR 36E.1

<400> 33

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atg gtt cgt tac gtg ccc cgg ttc gct gat ggt cag aaa gta aag ttg   48
Met Val Arg Tyr Val Pro Arg Phe Ala Asp Gly Gln Lys Val Lys Leu
  1               5                  10                  15

gct tgg ccc ttg gcg gtt ttt cgg tta aat cac ata ttc tgg cca ttg   96
Ala Trp Pro Leu Ala Val Phe Arg Leu Asn His Ile Phe Trp Pro Leu
             20                  25                  30

gat ccg agc aca ggg aaa tgg ggc cga tat ctg gac aag gtt cta gct   144
Asp Pro Ser Thr Gly Lys Trp Gly Arg Tyr Leu Asp Lys Val Leu Ala
         35                  40                  45

gtt gcg atg tcc ttg gtt ttt atg caa cac aac gat gca gag ctg agg   192
Val Ala Met Ser Leu Val Phe Met Gln His Asn Asp Ala Glu Leu Arg
     50                  55                  60

tac ttg cgc ttc gag gca agt aat cgg aat ttg gat gcc ttt ctc aca   240
Tyr Leu Arg Phe Glu Ala Ser Asn Arg Asn Leu Asp Ala Phe Leu Thr
 65                  70                  75                  80

gga atg cca acg tat tta atc ctc gtg gag gct caa ttt aga agt ctt   288
Gly Met Pro Thr Tyr Leu Ile Leu Val Glu Ala Gln Phe Arg Ser Leu
                 85                  90                  95
```

```
cac att cta ctg cac ttc gag aag ctt cag aag ttt tta gaa ata ttc   336
His Ile Leu Leu His Phe Glu Lys Leu Gln Lys Phe Leu Glu Ile Phe
            100                 105                 110

tac gca aat att tat att gat ccc cgt aag gaa ccc gaa atg ttt cga   384
Tyr Ala Asn Ile Tyr Ile Asp Pro Arg Lys Glu Pro Glu Met Phe Arg
        115                 120                 125

aaa gtg gat gga aag atg ata att aac aga tta gtt tcg gcc atg tac   432
Lys Val Asp Gly Lys Met Ile Ile Asn Arg Leu Val Ser Ala Met Tyr
    130                 135                 140

ggt gca gtt atc tct ctg tat cta atc gca ccc gtt ttt tcc atc att   480
Gly Ala Val Ile Ser Leu Tyr Leu Ile Ala Pro Val Phe Ser Ile Ile
145                 150                 155                 160

aac caa agc aaa gat ttt cta tac tct atg atc ttt ccg ttc gat tcg   528
Asn Gln Ser Lys Asp Phe Leu Tyr Ser Met Ile Phe Pro Phe Asp Ser
                165                 170                 175

gat ccc ttg tac ata ttt gtg cca ctg ctt ttg aca aac gta tgg gtt   576
Asp Pro Leu Tyr Ile Phe Val Pro Leu Leu Leu Thr Asn Val Trp Val
            180                 185                 190

ggc att gta ata gat acc atg atg ttc ggg gag acg aat ttg ttg tgt   624
Gly Ile Val Ile Asp Thr Met Met Phe Gly Glu Thr Asn Leu Leu Cys
        195                 200                 205

gaa cta att gtc cac cta aat ggt agt tat atg ttg ctc aag agg gac   672
Glu Leu Ile Val His Leu Asn Gly Ser Tyr Met Leu Leu Lys Arg Asp
    210                 215                 220

ttg cag ttg gcc att gaa aag ata tta gtt gca agg gac cgt ccg cat   720
Leu Gln Leu Ala Ile Glu Lys Ile Leu Val Ala Arg Asp Arg Pro His
225                 230                 235                 240

atg gcc aaa cag cta aag gtt tta att aca aaa act ctc cga aag aat   768
Met Ala Lys Gln Leu Lys Val Leu Ile Thr Lys Thr Leu Arg Lys Asn
                245                 250                 255

gtg gct cta aat cag ttt ggc cag cag ctg gag gct cag tat act gtg   816
Val Ala Leu Asn Gln Phe Gly Gln Gln Leu Glu Ala Gln Tyr Thr Val
            260                 265                 270

cgg gtt ttt att atg ttt gca ttc gct gcg ggc ctt tta tgt gct ctt   864
Arg Val Phe Ile Met Phe Ala Phe Ala Ala Gly Leu Leu Cys Ala Leu
        275                 280                 285
```

```
tct ttt aag gct tat acg acg gat tcc ctc agc aca atg tac tac ctt   912
Ser Phe Lys Ala Tyr Thr Thr Asp Ser Leu Ser Thr Met Tyr Tyr Leu
    290                 295                 300

acc cat tgg gag caa atc ctg cag tac tct aca aat ccc agc gaa aat   960
Thr His Trp Glu Gln Ile Leu Gln Tyr Ser Thr Asn Pro Ser Glu Asn
305                 310                 315                 320

ctg cga tta cta aag ctc att aac ttg gcc att gag atg aac agc aag   1008
Leu Arg Leu Leu Lys Leu Ile Asn Leu Ala Ile Glu Met Asn Ser Lys
                325                 330                 335

ccc ttc tat gtg aca ggg cta aaa tat ttt cgc gtt agt ctg cag gct   1056
Pro Phe Tyr Val Thr Gly Leu Lys Tyr Phe Arg Val Ser Leu Gln Ala
            340                 345                 350

ggc tta aaa gta agt gaa aaa cga gtg caa aac cat ttc act gtc agc   1104
Gly Leu Lys Val Ser Glu Lys Arg Val Gln Asn His Phe Thr Val Ser
        355                 360                 365

tct ttc aca gat tct gca ggc atc ctt ctc gta ctt cac att cct cac   1152
Ser Phe Thr Asp Ser Ala Gly Ile Leu Leu Val Leu His Ile Pro His
    370                 375                 380

ttc gat gca gcg acg aca aat gag caa tta aat aat tca cat ttt ttt   1200
Phe Asp Ala Ala Thr Thr Asn Glu Gln Leu Asn Asn Ser His Phe Phe
385                 390                 395                 400
```

<210> 34
<211> 400
<212> PRT
<213> Drosophila melanogaster

<400> 34

```
Met Val Arg Tyr Val Pro Arg Phe Ala Asp Gly Gln Lys Val Lys Leu
  1               5                  10                  15

Ala Trp Pro Leu Ala Val Phe Arg Leu Asn His Ile Phe Trp Pro Leu
             20                  25                  30

Asp Pro Ser Thr Gly Lys Trp Gly Arg Tyr Leu Asp Lys Val Leu Ala
         35                  40                  45

Val Ala Met Ser Leu Val Phe Met Gln His Asn Asp Ala Glu Leu Arg
     50                  55                  60
```

```
Tyr Leu Arg Phe Glu Ala Ser Asn Arg Asn Leu Asp Ala Phe Leu Thr
 65                  70                  75                  80

Gly Met Pro Thr Tyr Leu Ile Leu Val Glu Ala Gln Phe Arg Ser Leu
                 85                  90                  95

His Ile Leu Leu His Phe Glu Lys Leu Gln Lys Phe Leu Glu Ile Phe
            100                 105                 110

Tyr Ala Asn Ile Tyr Ile Asp Pro Arg Lys Glu Pro Glu Met Phe Arg
        115                 120                 125

Lys Val Asp Gly Lys Met Ile Ile Asn Arg Leu Val Ser Ala Met Tyr
    130                 135                 140

Gly Ala Val Ile Ser Leu Tyr Leu Ile Ala Pro Val Phe Ser Ile Ile
145                 150                 155                 160

Asn Gln Ser Lys Asp Phe Leu Tyr Ser Met Ile Phe Pro Phe Asp Ser
                165                 170                 175

Asp Pro Leu Tyr Ile Phe Val Pro Leu Leu Leu Thr Asn Val Trp Val
            180                 185                 190

Gly Ile Val Ile Asp Thr Met Met Phe Gly Glu Thr Asn Leu Leu Cys
        195                 200                 205

Glu Leu Ile Val His Leu Asn Gly Ser Tyr Met Leu Leu Lys Arg Asp
    210                 215                 220

Leu Gln Leu Ala Ile Glu Lys Ile Leu Val Ala Arg Asp Arg Pro His
225                 230                 235                 240

Met Ala Lys Gln Leu Lys Val Leu Ile Thr Lys Thr Leu Arg Lys Asn
                245                 250                 255

Val Ala Leu Asn Gln Phe Gly Gln Gln Leu Glu Ala Gln Tyr Thr Val
            260                 265                 270

Arg Val Phe Ile Met Phe Ala Phe Ala Ala Gly Leu Leu Cys Ala Leu
        275                 280                 285

Ser Phe Lys Ala Tyr Thr Thr Asp Ser Leu Ser Thr Met Tyr Tyr Leu
    290                 295                 300

Thr His Trp Glu Gln Ile Leu Gln Tyr Ser Thr Asn Pro Ser Glu Asn
305                 310                 315                 320
```

```
Leu Arg Leu Leu Lys Leu Ile Asn Leu Ala Ile Glu Met Asn Ser Lys
                325                 330                 335

Pro Phe Tyr Val Thr Gly Leu Lys Tyr Phe Arg Val Ser Leu Gln Ala
            340                 345                 350

Gly Leu Lys Val Ser Glu Lys Arg Val Gln Asn His Phe Thr Val Ser
        355                 360                 365

Ser Phe Thr Asp Ser Ala Gly Ile Leu Leu Val Leu His Ile Pro His
    370                 375                 380

Phe Asp Ala Ala Thr Thr Asn Glu Gln Leu Asn Asn Ser His Phe Phe
385                 390                 395                 400
```

<210> 35
<211> 1197
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1197)
<223> DOR 41E.1

<400> 35

```
atg gtc ttc gag cta ata cgt ccc gct ccg ctc acg gag cag aag cgg   48
Met Val Phe Glu Leu Ile Arg Pro Ala Pro Leu Thr Glu Gln Lys Arg
  1               5                  10                  15

tcc cga gat ggt tgc atc tac ctt tac cgc gcc atg aag ttt att gga   96
Ser Arg Asp Gly Cys Ile Tyr Leu Tyr Arg Ala Met Lys Phe Ile Gly
             20                  25                  30

tgg ctg ccc ccc aag cag ggt gtg ctc cgg tat gtg tac ctc acc tgg   144
Trp Leu Pro Pro Lys Gln Gly Val Leu Arg Tyr Val Tyr Leu Thr Trp
         35                  40                  45

acg cta atg acg ttc gtg tgg tgt aca acg tac ctg ccg ctt ggc ttc   192
Thr Leu Met Thr Phe Val Trp Cys Thr Thr Tyr Leu Pro Leu Gly Phe
     50                  55                  60

ctt ggt agc tac atg acg cag atc aag tcc ttc tcc cct gga gag ttt   240
Leu Gly Ser Tyr Met Thr Gln Ile Lys Ser Phe Ser Pro Gly Glu Phe
 65                  70                  75                  80
```

```
ctc act tca ctc cag gtg tgc att aat gcc tac ggc tca tcg gta aaa   288
Leu Thr Ser Leu Gln Val Cys Ile Asn Ala Tyr Gly Ser Ser Val Lys
                85                  90                  95

gtt gca atc aca tac tcc atg ctc tgg cgc ctt atc aag gcc aag aac   336
Val Ala Ile Thr Tyr Ser Met Leu Trp Arg Leu Ile Lys Ala Lys Asn
            100                 105                 110

att ttg gac cag ctg gac ctg cgc tgc acc gcc atg gag gag cgc gaa   384
Ile Leu Asp Gln Leu Asp Leu Arg Cys Thr Ala Met Glu Glu Arg Glu
        115                 120                 125

aag atc cac cta gtg gtg gcc cgc agc aac cat gcc ttt ctc atc ttc   432
Lys Ile His Leu Val Val Ala Arg Ser Asn His Ala Phe Leu Ile Phe
    130                 135                 140

acc ttt gtc tac tgc gga tat gcc ggc tcc acc tac ctg agc tcg gtt   480
Thr Phe Val Tyr Cys Gly Tyr Ala Gly Ser Thr Tyr Leu Ser Ser Val
145                 150                 155                 160

ctc agc ggg cgt ccg ccc tgg cag ctg tac aat ccc ttt att gat tgg   528
Leu Ser Gly Arg Pro Pro Trp Gln Leu Tyr Asn Pro Phe Ile Asp Trp
                165                 170                 175

cat gac ggc aca ctc aag ctc tgg gtg gcc tcc acg ttg gag tac atg   576
His Asp Gly Thr Leu Lys Leu Trp Val Ala Ser Thr Leu Glu Tyr Met
            180                 185                 190

gtg atg tca ggc gcc gtt ctg cag gat caa ctc tcg gac tct tac cca   624
Val Met Ser Gly Ala Val Leu Gln Asp Gln Leu Ser Asp Ser Tyr Pro
        195                 200                 205

ttg atc tat acc ctc atc ctt cgt gct cac ttg gac atg cta agg gag   672
Leu Ile Tyr Thr Leu Ile Leu Arg Ala His Leu Asp Met Leu Arg Glu
    210                 215                 220

cgc atc cga cgc ctc cgt tcc gat gag aac ctg agc gag gcc gag agc   720
Arg Ile Arg Arg Leu Arg Ser Asp Glu Asn Leu Ser Glu Ala Glu Ser
225                 230                 235                 240

tat gaa gag ctg gtc aaa tgt gtg atg gac cac aag ctc att cta aga   768
Tyr Glu Glu Leu Val Lys Cys Val Met Asp His Lys Leu Ile Leu Arg
                245                 250                 255

tac tgc gcg att att aaa cca gta atc cag ggg acc atc ttc aca cag   816
Tyr Cys Ala Ile Ile Lys Pro Val Ile Gln Gly Thr Ile Phe Thr Gln
            260                 265                 270
```

```
ttt ctg ctg atc ggc ctg gtt ctg ggc ttc acg ctg atc aac gtg ttt   864
Phe Leu Leu Ile Gly Leu Val Leu Gly Phe Thr Leu Ile Asn Val Phe
        275                 280                 285

ttc ttc tca gac atc tgg acg ggc atc gca tca ttt atg ttt gtt ata   912
Phe Phe Ser Asp Ile Trp Thr Gly Ile Ala Ser Phe Met Phe Val Ile
    290                 295                 300

acc att ttg ctg cag acc ttc ccc ttc tgc tac aca tgc aac ctc atc   960
Thr Ile Leu Leu Gln Thr Phe Pro Phe Cys Tyr Thr Cys Asn Leu Ile
305                 310                 315                 320

atg gag gac tgc gag tcc ttg acc cat gct att ttc cag tcc aac tgg   1008
Met Glu Asp Cys Glu Ser Leu Thr His Ala Ile Phe Gln Ser Asn Trp
                325                 330                 335

gtg gat gcc agt cgt cgc tac aaa aca aca cta ctg tat ttt ctc caa   1056
Val Asp Ala Ser Arg Arg Tyr Lys Thr Thr Leu Leu Tyr Phe Leu Gln
            340                 345                 350

aac gtg cag cag cct atc gtt ttc att gca ggc ggt atc ttt cag ata   1104
Asn Val Gln Gln Pro Ile Val Phe Ile Ala Gly Gly Ile Phe Gln Ile
        355                 360                 365

tcc atg agc agc aac ata agt gtg gca aag ttt gct ttc tcc gtg ata   1152
Ser Met Ser Ser Asn Ile Ser Val Ala Lys Phe Ala Phe Ser Val Ile
    370                 375                 380

acc att acc aag caa atg aat ata gct gac aaa ttt aag acg gac       1197
Thr Ile Thr Lys Gln Met Asn Ile Ala Asp Lys Phe Lys Thr Asp
385                 390                 395
```

<210> 36
<211> 399
<212> PRT
<213> Drosophila melanogaster

<400> 36

```
Met Val Phe Glu Leu Ile Arg Pro Ala Pro Leu Thr Glu Gln Lys Arg
  1               5                  10                  15

Ser Arg Asp Gly Cys Ile Tyr Leu Tyr Arg Ala Met Lys Phe Ile Gly
             20                  25                  30

Trp Leu Pro Pro Lys Gln Gly Val Leu Arg Tyr Val Tyr Leu Thr Trp
         35                  40                  45
```

```
Thr Leu Met Thr Phe Val Trp Cys Thr Thr Tyr Leu Pro Leu Gly Phe
     50                  55                  60

Leu Gly Ser Tyr Met Thr Gln Ile Lys Ser Phe Ser Pro Gly Glu Phe
 65                  70                  75                  80

Leu Thr Ser Leu Gln Val Cys Ile Asn Ala Tyr Gly Ser Ser Val Lys
                 85                  90                  95

Val Ala Ile Thr Tyr Ser Met Leu Trp Arg Leu Ile Lys Ala Lys Asn
            100                 105                 110

Ile Leu Asp Gln Leu Asp Leu Arg Cys Thr Ala Met Glu Glu Arg Glu
        115                 120                 125

Lys Ile His Leu Val Val Ala Arg Ser Asn His Ala Phe Leu Ile Phe
    130                 135                 140

Thr Phe Val Tyr Cys Gly Tyr Ala Gly Ser Thr Tyr Leu Ser Ser Val
145                 150                 155                 160

Leu Ser Gly Arg Pro Pro Trp Gln Leu Tyr Asn Pro Phe Ile Asp Trp
                165                 170                 175

His Asp Gly Thr Leu Lys Leu Trp Val Ala Ser Thr Leu Glu Tyr Met
            180                 185                 190

Val Met Ser Gly Ala Val Leu Gln Asp Gln Leu Ser Asp Ser Tyr Pro
        195                 200                 205

Leu Ile Tyr Thr Leu Ile Leu Arg Ala His Leu Asp Met Leu Arg Glu
    210                 215                 220

Arg Ile Arg Arg Leu Arg Ser Asp Glu Asn Leu Ser Glu Ala Glu Ser
225                 230                 235                 240

Tyr Glu Glu Leu Val Lys Cys Val Met Asp His Lys Leu Ile Leu Arg
                245                 250                 255

Tyr Cys Ala Ile Ile Lys Pro Val Ile Gln Gly Thr Ile Phe Thr Gln
            260                 265                 270

Phe Leu Leu Ile Gly Leu Val Leu Gly Phe Thr Leu Ile Asn Val Phe
        275                 280                 285

Phe Phe Ser Asp Ile Trp Thr Gly Ile Ala Ser Phe Met Phe Val Ile
    290                 295                 300
```

```
Thr Ile Leu Leu Gln Thr Phe Pro Phe Cys Tyr Thr Cys Asn Leu Ile
305                 310                 315                 320

Met Glu Asp Cys Glu Ser Leu Thr His Ala Ile Phe Gln Ser Asn Trp
                325                 330                 335

Val Asp Ala Ser Arg Arg Tyr Lys Thr Thr Leu Leu Tyr Phe Leu Gln
            340                 345                 350

Asn Val Gln Gln Pro Ile Val Phe Ile Ala Gly Gly Ile Phe Gln Ile
        355                 360                 365

Ser Met Ser Ser Asn Ile Ser Val Ala Lys Phe Ala Phe Ser Val Ile
    370                 375                 380

Thr Ile Thr Lys Gln Met Asn Ile Ala Asp Lys Phe Lys Thr Asp
385                 390                 395
```

<210> 37
<211> 1218
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1218)
<223> DOR 41E.2

<400> 37

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atg gat ctg cga agg tgg ttt ccg acc ttg tac acc cag tcg aag gat   48
Met Asp Leu Arg Arg Trp Phe Pro Thr Leu Tyr Thr Gln Ser Lys Asp
  1               5                  10                  15

tcg cca gtt cgc tcc cga gac gcg acc ctg tac ctc cta cgc tgc gtc   96
Ser Pro Val Arg Ser Arg Asp Ala Thr Leu Tyr Leu Leu Arg Cys Val
             20                  25                  30

ttc tta atg ggc gtc cgc aag cca cct gcc aag ttt ttc gtg gcc tac   144
Phe Leu Met Gly Val Arg Lys Pro Pro Ala Lys Phe Phe Val Ala Tyr
         35                  40                  45

gtg ctc tgg tcc ttc gca ctg aat ttc tgc tca aca ttt tat cag cca   192
Val Leu Trp Ser Phe Ala Leu Asn Phe Cys Ser Thr Phe Tyr Gln Pro
     50                  55                  60

att ggc ttt ctc aca ggc tat ata agc cat tta tca gag ttc tcc ccg   240
```

```
Ile Gly Phe Leu Thr Gly Tyr Ile Ser His Leu Ser Glu Phe Ser Pro
 65                  70                  75                  80

gga gag ttt cta act tcg ctg cag gtg gcc ttt aat gct tgg tcc tgc   288
Gly Glu Phe Leu Thr Ser Leu Gln Val Ala Phe Asn Ala Trp Ser Cys
                85                  90                  95

tct aca aaa gtc ctg ata gtg tgg gca cta gtt aag cgc ttt gac gag   336
Ser Thr Lys Val Leu Ile Val Trp Ala Leu Val Lys Arg Phe Asp Glu
            100                 105                 110

gct aat aac ctt ctc gac gag atg gat agg cgt atc aca gac ccc gga   384
Ala Asn Asn Leu Leu Asp Glu Met Asp Arg Arg Ile Thr Asp Pro Gly
        115                 120                 125

gag cgt ctt cag att cat cgc gct gtc tcc ctc agt aac cgt ata ttc   432
Glu Arg Leu Gln Ile His Arg Ala Val Ser Leu Ser Asn Arg Ile Phe
    130                 135                 140

ttc ttt ttc atg gca gtc tac atg gtt tat gcc act aat acg ttt ctg   480
Phe Phe Phe Met Ala Val Tyr Met Val Tyr Ala Thr Asn Thr Phe Leu
145                 150                 155                 160

tcg gcg atc ttc att gga agg cca ccg tac caa aat tac tac cct ttt   528
Ser Ala Ile Phe Ile Gly Arg Pro Pro Tyr Gln Asn Tyr Tyr Pro Phe
                165                 170                 175

ctg gac tgg cga tct agc act ctg cat cta gct ctg cag gcc ggt ctg   576
Leu Asp Trp Arg Ser Ser Thr Leu His Leu Ala Leu Gln Ala Gly Leu
            180                 185                 190

gaa tac ttc gcc atg gct ggc gcc tgc ttc cag gac gtt tgc gtt gat   624
Glu Tyr Phe Ala Met Ala Gly Ala Cys Phe Gln Asp Val Cys Val Asp
        195                 200                 205

tgc tac cca gtc aat ttc gtt ttg gtc ctg cgt gcc cac atg tcg atc   672
Cys Tyr Pro Val Asn Phe Val Leu Val Leu Arg Ala His Met Ser Ile
    210                 215                 220

ttc gcg gag cgc ctt cga cgt ttg gga act tat cct tat gaa agc cag   720
Phe Ala Glu Arg Leu Arg Arg Leu Gly Thr Tyr Pro Tyr Glu Ser Gln
225                 230                 235                 240

gag cag aaa tat gaa cga ttg gtt cag tgc ata caa gat cac aaa gta   768
Glu Gln Lys Tyr Glu Arg Leu Val Gln Cys Ile Gln Asp His Lys Val
                245                 250                 255

att ttg cga ttt gtt gac tgc ctg cgt cct gtt att tct ggt acc atc   816
```

```
Ile Leu Arg Phe Val Asp Cys Leu Arg Pro Val Ile Ser Gly Thr Ile
            260                 265                 270

ttc gtg caa ttc ttg gtt gtg ggg ttg gtg ctg ggc ttt acc cta att   864
Phe Val Gln Phe Leu Val Val Gly Leu Val Leu Gly Phe Thr Leu Ile
        275                 280                 285

aac att gtc ctg ttc gcc aac ttg gga tcg gcc atc gca gcg ctc tcg   912
Asn Ile Val Leu Phe Ala Asn Leu Gly Ser Ala Ile Ala Ala Leu Ser
    290                 295                 300

ttt atg gcc gca gtg ctt cta gag acg act ccc ttc tgc ata ttg tgc   960
Phe Met Ala Ala Val Leu Leu Glu Thr Thr Pro Phe Cys Ile Leu Cys
305                 310                 315                 320

aat tat ctc aca gaa gac tgc tac aag ctg gcc gat gcc ctg ttt cag   1008
Asn Tyr Leu Thr Glu Asp Cys Tyr Lys Leu Ala Asp Ala Leu Phe Gln
                325                 330                 335

tca aac tgg att gat gag gag aaa cga tac caa aag aca ctc atg tac   1056
Ser Asn Trp Ile Asp Glu Glu Lys Arg Tyr Gln Lys Thr Leu Met Tyr
            340                 345                 350

ttc cta cag aaa ctg cag cag cct ata acc ttc atg gct atg aac gtg   1104
Phe Leu Gln Lys Leu Gln Gln Pro Ile Thr Phe Met Ala Met Asn Val
        355                 360                 365

ttt cca ata tct gtg gga act aac atc agt gtc aca aaa ttt tcg ttc   1152
Phe Pro Ile Ser Val Gly Thr Asn Ile Ser Val Thr Lys Phe Ser Phe
    370                 375                 380

tcc gtc ttt act ctc gta aaa caa atg aac ata tct gag aaa ctt gcc   1200
Ser Val Phe Thr Leu Val Lys Gln Met Asn Ile Ser Glu Lys Leu Ala
385                 390                 395                 400

aaa tct gaa atg gaa gag                                         1218
Lys Ser Glu Met Glu Glu
                405
```

<210> 38
<211> 406
<212> PRT
<213> Drosophila melanogaster

<400> 38
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Met Asp Leu Arg Arg Trp Phe Pro Thr Leu Tyr Thr Gln Ser Lys Asp
  1               5                  10                  15
```

```
Ser Pro Val Arg Ser Arg Asp Ala Thr Leu Tyr Leu Leu Arg Cys Val
            20                  25                  30

Phe Leu Met Gly Val Arg Lys Pro Pro Ala Lys Phe Phe Val Ala Tyr
        35                  40                  45

Val Leu Trp Ser Phe Ala Leu Asn Phe Cys Ser Thr Phe Tyr Gln Pro
    50                  55                  60

Ile Gly Phe Leu Thr Gly Tyr Ile Ser His Leu Ser Glu Phe Ser Pro
65                  70                  75                  80

Gly Glu Phe Leu Thr Ser Leu Gln Val Ala Phe Asn Ala Trp Ser Cys
                85                  90                  95

Ser Thr Lys Val Leu Ile Val Trp Ala Leu Val Lys Arg Phe Asp Glu
            100                 105                 110

Ala Asn Asn Leu Leu Asp Glu Met Asp Arg Arg Ile Thr Asp Pro Gly
        115                 120                 125

Glu Arg Leu Gln Ile His Arg Ala Val Ser Leu Ser Asn Arg Ile Phe
    130                 135                 140

Phe Phe Phe Met Ala Val Tyr Met Val Tyr Ala Thr Asn Thr Phe Leu
145                 150                 155                 160

Ser Ala Ile Phe Ile Gly Arg Pro Pro Tyr Gln Asn Tyr Tyr Pro Phe
                165                 170                 175

Leu Asp Trp Arg Ser Ser Thr Leu His Leu Ala Leu Gln Ala Gly Leu
            180                 185                 190

Glu Tyr Phe Ala Met Ala Gly Ala Cys Phe Gln Asp Val Cys Val Asp
        195                 200                 205

Cys Tyr Pro Val Asn Phe Val Leu Val Leu Arg Ala His Met Ser Ile
    210                 215                 220

Phe Ala Glu Arg Leu Arg Arg Leu Gly Thr Tyr Pro Tyr Glu Ser Gln
225                 230                 235                 240

Glu Gln Lys Tyr Glu Arg Leu Val Gln Cys Ile Gln Asp His Lys Val
                245                 250                 255

Ile Leu Arg Phe Val Asp Cys Leu Arg Pro Val Ile Ser Gly Thr Ile
            260                 265                 270
```

```
Phe Val Gln Phe Leu Val Val Gly Leu Val Leu Gly Phe Thr Leu Ile
        275                 280                 285

Asn Ile Val Leu Phe Ala Asn Leu Gly Ser Ala Ile Ala Ala Leu Ser
    290                 295                 300

Phe Met Ala Ala Val Leu Leu Glu Thr Thr Pro Phe Cys Ile Leu Cys
305                 310                 315                 320

Asn Tyr Leu Thr Glu Asp Cys Tyr Lys Leu Ala Asp Ala Leu Phe Gln
                325                 330                 335

Ser Asn Trp Ile Asp Glu Glu Lys Arg Tyr Gln Lys Thr Leu Met Tyr
            340                 345                 350

Phe Leu Gln Lys Leu Gln Gln Pro Ile Thr Phe Met Ala Met Asn Val
        355                 360                 365

Phe Pro Ile Ser Val Gly Thr Asn Ile Ser Val Thr Lys Phe Ser Phe
    370                 375                 380

Ser Val Phe Thr Leu Val Lys Gln Met Asn Ile Ser Glu Lys Leu Ala
385                 390                 395                 400

Lys Ser Glu Met Glu Glu
                405
```

<210> 39
<211> 1188
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1188)
<223> DOR 45F.1

<400> 39

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atg tat ccg cga ttc ctc agc cgt aac tat ccg ctg gcc aag cat ttg   48
Met Tyr Pro Arg Phe Leu Ser Arg Asn Tyr Pro Leu Ala Lys His Leu
  1               5                  10                  15

ttc ttc gtc acc aga tac tcc ttt ggc ctg ctg ggc ctg aga ttt ggc   96
Phe Phe Val Thr Arg Tyr Ser Phe Gly Leu Leu Gly Leu Arg Phe Gly
             20                  25                  30
```

```
aaa gag caa tcg tgg ctt cac ctc ttg tgg ctg gtg ttc aat ttc gtt   144
Lys Glu Gln Ser Trp Leu His Leu Leu Trp Leu Val Phe Asn Phe Val
         35                  40                  45

aac ctg gcg cac tgc tgc cag gcg gag ttc gtc ttc ggc tgg agt cac   192
Asn Leu Ala His Cys Cys Gln Ala Glu Phe Val Phe Gly Trp Ser His
     50                  55                  60

ttg cgc acc agt ccc gtg gat gcc atg gac gcc ttt tgt cct ctg gcc   240
Leu Arg Thr Ser Pro Val Asp Ala Met Asp Ala Phe Cys Pro Leu Ala
 65                  70                  75                  80

tgc agt ttc acc acg ctc ttc aag ctg gga tgg atg tgg tgg cgt cgc   288
Cys Ser Phe Thr Thr Leu Phe Lys Leu Gly Trp Met Trp Trp Arg Arg
                 85                  90                  95

cag gaa gta gct gat cta atg gac cgc atc cgc ttg ctc atc ggg gag   336
Gln Glu Val Ala Asp Leu Met Asp Arg Ile Arg Leu Leu Ile Gly Glu
            100                 105                 110

cag gag aag agg gag gac tcc cgg aga aag gtg gct caa agg agc tac   384
Gln Glu Lys Arg Glu Asp Ser Arg Arg Lys Val Ala Gln Arg Ser Tyr
        115                 120                 125

tat ctc atg gtc acc agg tgc ggt atg ctg gtc ttc acc ctg ggc agc   432
Tyr Leu Met Val Thr Arg Cys Gly Met Leu Val Phe Thr Leu Gly Ser
    130                 135                 140

att acc act gga gcc ttc gtt ctg cgt tcc ctt tgg gaa atg tgg gtg   480
Ile Thr Thr Gly Ala Phe Val Leu Arg Ser Leu Trp Glu Met Trp Val
145                 150                 155                 160

cgt cgt cat cag gag ttc aaa ttc gat atg ccc ttt cgc atg ctg ttc   528
Arg Arg His Gln Glu Phe Lys Phe Asp Met Pro Phe Arg Met Leu Phe
                165                 170                 175

cac gac ttt gcg cat cgc atg ccc tgg ttt cca gtt ttc tat ctc tac   576
His Asp Phe Ala His Arg Met Pro Trp Phe Pro Val Phe Tyr Leu Tyr
            180                 185                 190

tcc aca tgg agt ggc cag gtc act gtg tac gcc ttt gct ggt aca gat   624
Ser Thr Trp Ser Gly Gln Val Thr Val Tyr Ala Phe Ala Gly Thr Asp
        195                 200                 205

ggt ttc ttc ttt ggc ttt acc ctc tac atg gcc ttc ttg ctg cag gcc   672
Gly Phe Phe Phe Gly Phe Thr Leu Tyr Met Ala Phe Leu Leu Gln Ala
    210                 215                 220
```

```
tta aga tac gat atc cag gat gcc ctc aag cca ata aga gat ccc tcg   720
Leu Arg Tyr Asp Ile Gln Asp Ala Leu Lys Pro Ile Arg Asp Pro Ser
225                 230                 235                 240

ctt agg gaa tcc aaa atc tgc tgt cag cga ttg gcg gac atc gtg gat   768
Leu Arg Glu Ser Lys Ile Cys Cys Gln Arg Leu Ala Asp Ile Val Asp
                245                 250                 255

cgc cac aat gag ata gag aag ata gtc aag gaa ttt tct gga att atg   816
Arg His Asn Glu Ile Glu Lys Ile Val Lys Glu Phe Ser Gly Ile Met
            260                 265                 270

gct gct cca act ttt gtt cac ttc gta tca gcc agc tta gtg ata gcc   864
Ala Ala Pro Thr Phe Val His Phe Val Ser Ala Ser Leu Val Ile Ala
        275                 280                 285

acc agc gtc att gat ata cta ttg tat tcc ggc tat aac atc atc cgt   912
Thr Ser Val Ile Asp Ile Leu Leu Tyr Ser Gly Tyr Asn Ile Ile Arg
    290                 295                 300

tac gtg gtg tac acc ttc acg gtt tcc tcg gcc atc ttc ctc tat tgc   960
Tyr Val Val Tyr Thr Phe Thr Val Ser Ser Ala Ile Phe Leu Tyr Cys
305                 310                 315                 320

tac gga ggc aca gaa atg tca act gag agc ctt tcc ttg gga gaa gca   1008
Tyr Gly Gly Thr Glu Met Ser Thr Glu Ser Leu Ser Leu Gly Glu Ala
                325                 330                 335

gcc tac agc agt gcc tgg tat act tgg gat cga gag acc cgc agg cgg   1056
Ala Tyr Ser Ser Ala Trp Tyr Thr Trp Asp Arg Glu Thr Arg Arg Arg
            340                 345                 350

gtc ttt ctc att atc ctg cgt gct caa cga ccc att acg gtg agg gtg   1104
Val Phe Leu Ile Ile Leu Arg Ala Gln Arg Pro Ile Thr Val Arg Val
        355                 360                 365

ccc ttt ttt gca cca tcg tta cca gtc ttc aca tcg gtc atc aag ttt   1152
Pro Phe Phe Ala Pro Ser Leu Pro Val Phe Thr Ser Val Ile Lys Phe
    370                 375                 380

aca ggt tcg att gtg gca ctg gct aag acg ata ctg                   1188
Thr Gly Ser Ile Val Ala Leu Ala Lys Thr Ile Leu
385                 390                 395
```

<210> 40
<211> 396

<212> PRT
<213> Drosophila melanogaster

<400> 40

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Met Tyr Pro Arg Phe Leu Ser Arg Asn Tyr Pro Leu Ala Lys His Leu
  1               5                  10                  15

Phe Phe Val Thr Arg Tyr Ser Phe Gly Leu Leu Gly Leu Arg Phe Gly
             20                  25                  30

Lys Glu Gln Ser Trp Leu His Leu Leu Trp Leu Val Phe Asn Phe Val
         35                  40                  45

Asn Leu Ala His Cys Cys Gln Ala Glu Phe Val Phe Gly Trp Ser His
     50                  55                  60

Leu Arg Thr Ser Pro Val Asp Ala Met Asp Ala Phe Cys Pro Leu Ala
 65                  70                  75                  80

Cys Ser Phe Thr Thr Leu Phe Lys Leu Gly Trp Met Trp Trp Arg Arg
                 85                  90                  95

Gln Glu Val Ala Asp Leu Met Asp Arg Ile Arg Leu Leu Ile Gly Glu
            100                 105                 110

Gln Glu Lys Arg Glu Asp Ser Arg Arg Lys Val Ala Gln Arg Ser Tyr
        115                 120                 125

Tyr Leu Met Val Thr Arg Cys Gly Met Leu Val Phe Thr Leu Gly Ser
    130                 135                 140

Ile Thr Thr Gly Ala Phe Val Leu Arg Ser Leu Trp Glu Met Trp Val
145                 150                 155                 160

Arg Arg His Gln Glu Phe Lys Phe Asp Met Pro Phe Arg Met Leu Phe
                165                 170                 175

His Asp Phe Ala His Arg Met Pro Trp Phe Pro Val Phe Tyr Leu Tyr
            180                 185                 190

Ser Thr Trp Ser Gly Gln Val Thr Val Tyr Ala Phe Ala Gly Thr Asp
        195                 200                 205

Gly Phe Phe Phe Gly Phe Thr Leu Tyr Met Ala Phe Leu Leu Gln Ala
    210                 215                 220

Leu Arg Tyr Asp Ile Gln Asp Ala Leu Lys Pro Ile Arg Asp Pro Ser
225                 230                 235                 240
```

```
Leu Arg Glu Ser Lys Ile Cys Cys Gln Arg Leu Ala Asp Ile Val Asp
                245                 250                 255

Arg His Asn Glu Ile Glu Lys Ile Val Lys Glu Phe Ser Gly Ile Met
            260                 265                 270

Ala Ala Pro Thr Phe Val His Phe Val Ser Ala Ser Leu Val Ile Ala
        275                 280                 285

Thr Ser Val Ile Asp Ile Leu Leu Tyr Ser Gly Tyr Asn Ile Ile Arg
    290                 295                 300

Tyr Val Val Tyr Thr Phe Thr Val Ser Ser Ala Ile Phe Leu Tyr Cys
305                 310                 315                 320

Tyr Gly Gly Thr Glu Met Ser Thr Glu Ser Leu Ser Leu Gly Glu Ala
                325                 330                 335

Ala Tyr Ser Ser Ala Trp Tyr Thr Trp Asp Arg Glu Thr Arg Arg Arg
            340                 345                 350

Val Phe Leu Ile Ile Leu Arg Ala Gln Arg Pro Ile Thr Val Arg Val
        355                 360                 365

Pro Phe Phe Ala Pro Ser Leu Pro Val Phe Thr Ser Val Ile Lys Phe
    370                 375                 380

Thr Gly Ser Ile Val Ala Leu Ala Lys Thr Ile Leu
385                 390                 395
```

<210> 41
<211> 1158
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1158)
<223> DOR 49D.1

<400> 41
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atg ttt gaa gac att cag cta atc tac atg aat atc aag ata ttg cga   48
Met Phe Glu Asp Ile Gln Leu Ile Tyr Met Asn Ile Lys Ile Leu Arg
  1               5                  10                  15
```

```
ttc tgg gcc ctg ctc tat gac aaa aac ttg agg cgt tat gtg tgc att   96
Phe Trp Ala Leu Leu Tyr Asp Lys Asn Leu Arg Arg Tyr Val Cys Ile
            20                  25                  30

gga ctg gcc tca ttc cac atc ttc acc caa atc gtc tac atg atg agt   144
Gly Leu Ala Ser Phe His Ile Phe Thr Gln Ile Val Tyr Met Met Ser
        35                  40                  45

acc aat gaa gga cta acc ggg ata att cgt aac tca tat atg ctc gtc   192
Thr Asn Glu Gly Leu Thr Gly Ile Ile Arg Asn Ser Tyr Met Leu Val
    50                  55                  60

ctt tgg att aat acg gtg ctg cga gct tat ctc ttg ctg gcg gat cac   240
Leu Trp Ile Asn Thr Val Leu Arg Ala Tyr Leu Leu Leu Ala Asp His
65                  70                  75                  80

gac aga tat ttg gct ttg atc caa aaa cta act gag gcc tat tac gat   288
Asp Arg Tyr Leu Ala Leu Ile Gln Lys Leu Thr Glu Ala Tyr Tyr Asp
                85                  90                  95

tta ctg aat ctg aac gat tcg tat ata tcg gaa ata ttg gac cag gtg   336
Leu Leu Asn Leu Asn Asp Ser Tyr Ile Ser Glu Ile Leu Asp Gln Val
            100                 105                 110

aac aag gtg gga aag ttg atg gct agg ggc aat ctg ttc ttt ggc atg   384
Asn Lys Val Gly Lys Leu Met Ala Arg Gly Asn Leu Phe Phe Gly Met
        115                 120                 125

ctc aca tcc atg gga ttc ggt ctg tac cca ttg tcc tcc agc gaa aga   432
Leu Thr Ser Met Gly Phe Gly Leu Tyr Pro Leu Ser Ser Ser Glu Arg
    130                 135                 140

gct ctt aat ttt aaa acc cac ttt cct ttt gca gtc ctg cca ttt ggc   480
Ala Leu Asn Phe Lys Thr His Phe Pro Phe Ala Val Leu Pro Phe Gly
145                 150                 155                 160

agc aaa att cct ggt cta aat gag tac gag agt ccg tac tat gag atg   528
Ser Lys Ile Pro Gly Leu Asn Glu Tyr Glu Ser Pro Tyr Tyr Glu Met
                165                 170                 175

tgg tac atc ttt cag atg ctc atc acc ccg atg ggc tgt tgc atg tac   576
Trp Tyr Ile Phe Gln Met Leu Ile Thr Pro Met Gly Cys Cys Met Tyr
            180                 185                 190

att ccg tac acc agt ctg att gtg ggc ttg ata atg ttc ggc att gtg   624
Ile Pro Tyr Thr Ser Leu Ile Val Gly Leu Ile Met Phe Gly Ile Val
        195                 200                 205
```

```
agg tgc aag gct ttg cag cat cgc ctc cgc cag gtg gcg ctt aag cat   672
Arg Cys Lys Ala Leu Gln His Arg Leu Arg Gln Val Ala Leu Lys His
    210                 215                 220

ccg tac gga gat cgc gat ccc cgt gaa ctg agg gag gag atc ata gcc   720
Pro Tyr Gly Asp Arg Asp Pro Arg Glu Leu Arg Glu Glu Ile Ile Ala
225                 230                 235                 240

tgc ata cgt tac cag cag agc att atc gag tac atg gat cac ata aac   768
Cys Ile Arg Tyr Gln Gln Ser Ile Ile Glu Tyr Met Asp His Ile Asn
                245                 250                 255

gag ctg acc acc atg atg ttc cta ttc gaa ctg atg gcc ttt tcg gcg   816
Glu Leu Thr Thr Met Met Phe Leu Phe Glu Leu Met Ala Phe Ser Ala
            260                 265                 270

ctg ctc tgt gcg ctg ctc ttt atg ctg att atc gtc agc ggc acc agt   864
Leu Leu Cys Ala Leu Leu Phe Met Leu Ile Ile Val Ser Gly Thr Ser
        275                 280                 285

cag ctg ata att gtt tgc atg tac att aac atg att ctg gcc caa ata   912
Gln Leu Ile Ile Val Cys Met Tyr Ile Asn Met Ile Leu Ala Gln Ile
    290                 295                 300

ctg gcc ctc tat tgg tat gca aat gag tta agg gaa cag aat ctg gcg   960
Leu Ala Leu Tyr Trp Tyr Ala Asn Glu Leu Arg Glu Gln Asn Leu Ala
305                 310                 315                 320

gtg gcc acc gca gcc tac gaa acg gag tgg ttc acc ttc gac gtt cca  1008
Val Ala Thr Ala Ala Tyr Glu Thr Glu Trp Phe Thr Phe Asp Val Pro
                325                 330                 335

ctg cgc aaa aac atc ctg ttc atg atg atg agg gca cag cgg cca gct  1056
Leu Arg Lys Asn Ile Leu Phe Met Met Met Arg Ala Gln Arg Pro Ala
            340                 345                 350

gca ata cta ctg ggc aat ata cgc ccc atc act ttg gaa ctg ttc caa  1104
Ala Ile Leu Leu Gly Asn Ile Arg Pro Ile Thr Leu Glu Leu Phe Gln
        355                 360                 365

aac cta ctg aac aca acc tat aca ttt ttt acg gtt ctc aag cga gtc  1152
Asn Leu Leu Asn Thr Thr Tyr Thr Phe Phe Thr Val Leu Lys Arg Val
    370                 375                 380

tac gga                                                         1158
Tyr Gly
385
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<210> 42
<211> 386
<212> PRT
<213> Drosophila melanogaster

<400> 42
Met Phe Glu Asp Ile Gln Leu Ile Tyr Met Asn Ile Lys Ile Leu Arg
1 5 10 15

Phe Trp Ala Leu Leu Tyr Asp Lys Asn Leu Arg Arg Tyr Val Cys Ile
20 25 30

Gly Leu Ala Ser Phe His Ile Phe Thr Gln Ile Val Tyr Met Met Ser
35 40 45

Thr Asn Glu Gly Leu Thr Gly Ile Ile Arg Asn Ser Tyr Met Leu Val
50 55 60

Leu Trp Ile Asn Thr Val Leu Arg Ala Tyr Leu Leu Leu Ala Asp His
65 70 75 80

Asp Arg Tyr Leu Ala Leu Ile Gln Lys Leu Thr Glu Ala Tyr Tyr Asp
85 90 95

Leu Leu Asn Leu Asn Asp Ser Tyr Ile Ser Glu Ile Leu Asp Gln Val
100 105 110

Asn Lys Val Gly Lys Leu Met Ala Arg Gly Asn Leu Phe Phe Gly Met
115 120 125

Leu Thr Ser Met Gly Phe Gly Leu Tyr Pro Leu Ser Ser Ser Glu Arg
130 135 140

Ala Leu Asn Phe Lys Thr His Phe Pro Phe Ala Val Leu Pro Phe Gly
145 150 155 160

Ser Lys Ile Pro Gly Leu Asn Glu Tyr Glu Ser Pro Tyr Tyr Glu Met
165 170 175

Trp Tyr Ile Phe Gln Met Leu Ile Thr Pro Met Gly Cys Cys Met Tyr
180 185 190

Ile Pro Tyr Thr Ser Leu Ile Val Gly Leu Ile Met Phe Gly Ile Val
195 200 205

Arg Cys Lys Ala Leu Gln His Arg Leu Arg Gln Val Ala Leu Lys His
210 215 220

```
Pro Tyr Gly Asp Arg Asp Pro Arg Glu Leu Arg Glu Glu Ile Ile Ala
225                 230                 235                 240

Cys Ile Arg Tyr Gln Gln Ser Ile Ile Glu Tyr Met Asp His Ile Asn
                245                 250                 255

Glu Leu Thr Thr Met Met Phe Leu Phe Glu Leu Met Ala Phe Ser Ala
            260                 265                 270

Leu Leu Cys Ala Leu Leu Phe Met Leu Ile Ile Val Ser Gly Thr Ser
        275                 280                 285

Gln Leu Ile Ile Val Cys Met Tyr Ile Asn Met Ile Leu Ala Gln Ile
    290                 295                 300

Leu Ala Leu Tyr Trp Tyr Ala Asn Glu Leu Arg Glu Gln Asn Leu Ala
305                 310                 315                 320

Val Ala Thr Ala Ala Tyr Glu Thr Glu Trp Phe Thr Phe Asp Val Pro
                325                 330                 335

Leu Arg Lys Asn Ile Leu Phe Met Met Met Arg Ala Gln Arg Pro Ala
            340                 345                 350

Ala Ile Leu Leu Gly Asn Ile Arg Pro Ile Thr Leu Glu Leu Phe Gln
        355                 360                 365

Asn Leu Leu Asn Thr Thr Tyr Thr Phe Phe Thr Val Leu Lys Arg Val
    370                 375                 380

Tyr Gly
385
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<210> 43
<211> 1359
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1359)
<223> DOR 56E.1

<400> 43
atg gtt aac gct aaa cag ttt aac atg ttt aaa gtt aag gat ctg ttg 48

```
Met Val Asn Ala Lys Gln Phe Asn Met Phe Lys Val Lys Asp Leu Leu
  1               5                  10                  15

ctt tcg ccg aca act ttc gag gat cca att ttt gga acc cac ctg cga   96
Leu Ser Pro Thr Thr Phe Glu Asp Pro Ile Phe Gly Thr His Leu Arg
            20                  25                  30

tac ttc caa tgg tac gga tat gtg gcc tcc aag gat cag aat agg cct   144
Tyr Phe Gln Trp Tyr Gly Tyr Val Ala Ser Lys Asp Gln Asn Arg Pro
        35                  40                  45

ttg tta agt ctt ata cgg tgc acc att ttg acg gca tcg att tgg ctt   192
Leu Leu Ser Leu Ile Arg Cys Thr Ile Leu Thr Ala Ser Ile Trp Leu
    50                  55                  60

agc tgt gct tta atg ctg gcg aga gtg ttt cgt ggt tac gaa aac ctc   240
Ser Cys Ala Leu Met Leu Ala Arg Val Phe Arg Gly Tyr Glu Asn Leu
65                  70                  75                  80

aat gat ggg gcc aca agt tac gcc acc gca gtc cag tat ttc gcg gta   288
Asn Asp Gly Ala Thr Ser Tyr Ala Thr Ala Val Gln Tyr Phe Ala Val
                85                  90                  95

tcg att gcc atg ttt aat gct tac gta caa aga gat aga tat gtt ctt   336
Ser Ile Ala Met Phe Asn Ala Tyr Val Gln Arg Asp Arg Tyr Val Leu
            100                 105                 110

tta tac tta cac att gtt tta gaa gta ata tcc ctt ttg cga gtt gcc   384
Leu Tyr Leu His Ile Val Leu Glu Val Ile Ser Leu Leu Arg Val Ala
        115                 120                 125

cac tcg gat atc cag aac ttg atg cac gaa gca gat aat cgg gag atg   432
His Ser Asp Ile Gln Asn Leu Met His Glu Ala Asp Asn Arg Glu Met
    130                 135                 140

gaa ctt ttg gtc gcc act cag gct tat aca cga acc att acc ctg ttg   480
Glu Leu Leu Val Ala Thr Gln Ala Tyr Thr Arg Thr Ile Thr Leu Leu
145                 150                 155                 160

atc tgg ata cca tcg gtt att gct ggc cta atg gcc tat tca gac tgc   528
Ile Trp Ile Pro Ser Val Ile Ala Gly Leu Met Ala Tyr Ser Asp Cys
                165                 170                 175

atc tac agg agt ctg ttt ctg ccg aaa tcg gtt ttc aat gtg cca gct   576
Ile Tyr Arg Ser Leu Phe Leu Pro Lys Ser Val Phe Asn Val Pro Ala
            180                 185                 190

gtg cga cgt ggt gag gag cat ccc att ctg cta ttt cag ctg ttt ccc   624
```

```
Val Arg Arg Gly Glu Glu His Pro Ile Leu Leu Phe Gln Leu Phe Pro
        195                 200                 205

ttc gga gaa ctt tgc gat aac ttc gtt gtt gga tac ttg gga cct tgg   672
Phe Gly Glu Leu Cys Asp Asn Phe Val Val Gly Tyr Leu Gly Pro Trp
    210                 215                 220

tat gct ctg ggc ctg gga atc acg gct atc cca ttg tgg cac acc ttt   720
Tyr Ala Leu Gly Leu Gly Ile Thr Ala Ile Pro Leu Trp His Thr Phe
225                 230                 235                 240

atc act tgc ctc atg aag tac gta aat ctc aag ctg caa ata ctc aac   768
Ile Thr Cys Leu Met Lys Tyr Val Asn Leu Lys Leu Gln Ile Leu Asn
                245                 250                 255

aag cga gtg gag gag atg gat att acc cga ctt aat tcc aaa ttg gta   816
Lys Arg Val Glu Glu Met Asp Ile Thr Arg Leu Asn Ser Lys Leu Val
            260                 265                 270

att ggt cgc cta act gcc agt gag tta acc ttc tgg caa atg caa ctc   864
Ile Gly Arg Leu Thr Ala Ser Glu Leu Thr Phe Trp Gln Met Gln Leu
        275                 280                 285

ttc aag gaa ttt gta aag gaa cag ctg agg att cga aaa ttt gtc cag   912
Phe Lys Glu Phe Val Lys Glu Gln Leu Arg Ile Arg Lys Phe Val Gln
    290                 295                 300

gaa cta cag tat ctg att tgc gtg cct gtg atg gca gat ttc att atc   960
Glu Leu Gln Tyr Leu Ile Cys Val Pro Val Met Ala Asp Phe Ile Ile
305                 310                 315                 320

ttc tcg gtt ctc att tgc ttt ctc ttt ttt gcc ttg aca gtt ggc gtt  1008
Phe Ser Val Leu Ile Cys Phe Leu Phe Phe Ala Leu Thr Val Gly Val
                325                 330                 335

cca agc aaa atg gat tac ttc ttc atg ttc att tac ctt ttt gtg atg  1056
Pro Ser Lys Met Asp Tyr Phe Phe Met Phe Ile Tyr Leu Phe Val Met
            340                 345                 350

gct ggt ata ttg tgg att tat cat tgg cat gcc acg ttg att gtt gaa  1104
Ala Gly Ile Leu Trp Ile Tyr His Trp His Ala Thr Leu Ile Val Glu
        355                 360                 365

tgt cac gat gaa ctg agc ctt gct tac ttt tct tgc gga tgg tac aac  1152
Cys His Asp Glu Leu Ser Leu Ala Tyr Phe Ser Cys Gly Trp Tyr Asn
    370                 375                 380

ttc gaa atg cct ttg cag aaa atg ctg gtt ttt atg atg atg cat gcc  1200
```

```
Phe Glu Met Pro Leu Gln Lys Met Leu Val Phe Met Met Met His Ala
385                 390                 395                 400

caa agg ccg atg aag atg cgc gcc ctg ctg gtc gat ttg aat ctg agg   1248
Gln Arg Pro Met Lys Met Arg Ala Leu Leu Val Asp Leu Asn Leu Arg
                405                 410                 415

acc ttc ata gac gta agg ctg cta act gct aac tcg ata ttg gat tta   1296
Thr Phe Ile Asp Val Arg Leu Leu Thr Ala Asn Ser Ile Leu Asp Leu
            420                 425                 430

tcg aat tca agc ctt tcc ttt cca gat tgg ccg tgg agc cta cag cta   1344
Ser Asn Ser Ser Leu Ser Phe Pro Asp Trp Pro Trp Ser Leu Gln Leu
        435                 440                 445

ctt caa ttt gct gcg                                               1359
Leu Gln Phe Ala Ala
    450
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<210> 44
<211> 453
<212> PRT
<213> Drosophila melanogaster

<400> 44

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Met Val Asn Ala Lys Gln Phe Asn Met Phe Lys Val Lys Asp Leu Leu
  1               5                  10                  15

Leu Ser Pro Thr Thr Phe Glu Asp Pro Ile Phe Gly Thr His Leu Arg
             20                  25                  30

Tyr Phe Gln Trp Tyr Gly Tyr Val Ala Ser Lys Asp Gln Asn Arg Pro
         35                  40                  45

Leu Leu Ser Leu Ile Arg Cys Thr Ile Leu Thr Ala Ser Ile Trp Leu
     50                  55                  60

Ser Cys Ala Leu Met Leu Ala Arg Val Phe Arg Gly Tyr Glu Asn Leu
 65                  70                  75                  80

Asn Asp Gly Ala Thr Ser Tyr Ala Thr Ala Val Gln Tyr Phe Ala Val
                 85                  90                  95

Ser Ile Ala Met Phe Asn Ala Tyr Val Gln Arg Asp Arg Tyr Val Leu
            100                 105                 110

Leu Tyr Leu His Ile Val Leu Glu Val Ile Ser Leu Leu Arg Val Ala
```

```
        115                 120                 125

His Ser Asp Ile Gln Asn Leu Met His Glu Ala Asp Asn Arg Glu Met
    130                 135                 140

Glu Leu Leu Val Ala Thr Gln Ala Tyr Thr Arg Thr Ile Thr Leu Leu
145                 150                 155                 160

Ile Trp Ile Pro Ser Val Ile Ala Gly Leu Met Ala Tyr Ser Asp Cys
                165                 170                 175

Ile Tyr Arg Ser Leu Phe Leu Pro Lys Ser Val Phe Asn Val Pro Ala
            180                 185                 190

Val Arg Arg Gly Glu Glu His Pro Ile Leu Leu Phe Gln Leu Phe Pro
        195                 200                 205

Phe Gly Glu Leu Cys Asp Asn Phe Val Val Gly Tyr Leu Gly Pro Trp
    210                 215                 220

Tyr Ala Leu Gly Leu Gly Ile Thr Ala Ile Pro Leu Trp His Thr Phe
225                 230                 235                 240

Ile Thr Cys Leu Met Lys Tyr Val Asn Leu Lys Leu Gln Ile Leu Asn
                245                 250                 255

Lys Arg Val Glu Glu Met Asp Ile Thr Arg Leu Asn Ser Lys Leu Val
            260                 265                 270

Ile Gly Arg Leu Thr Ala Ser Glu Leu Thr Phe Trp Gln Met Gln Leu
        275                 280                 285

Phe Lys Glu Phe Val Lys Glu Gln Leu Arg Ile Arg Lys Phe Val Gln
    290                 295                 300

Glu Leu Gln Tyr Leu Ile Cys Val Pro Val Met Ala Asp Phe Ile Ile
305                 310                 315                 320

Phe Ser Val Leu Ile Cys Phe Leu Phe Phe Ala Leu Thr Val Gly Val
                325                 330                 335

Pro Ser Lys Met Asp Tyr Phe Phe Met Phe Ile Tyr Leu Phe Val Met
            340                 345                 350

Ala Gly Ile Leu Trp Ile Tyr His Trp His Ala Thr Leu Ile Val Glu
        355                 360                 365

Cys His Asp Glu Leu Ser Leu Ala Tyr Phe Ser Cys Gly Trp Tyr Asn
```

```
    370                 375                 380

Phe Glu Met Pro Leu Gln Lys Met Leu Val Phe Met Met Met His Ala
385                 390                 395                 400

Gln Arg Pro Met Lys Met Arg Ala Leu Leu Val Asp Leu Asn Leu Arg
                405                 410                 415

Thr Phe Ile Asp Val Arg Leu Leu Thr Ala Asn Ser Ile Leu Asp Leu
            420                 425                 430

Ser Asn Ser Ser Leu Ser Phe Pro Asp Trp Pro Trp Ser Leu Gln Leu
        435                 440                 445

Leu Gln Phe Ala Ala
    450
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<210> 45
<211> 1278
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1278)
<223> DOR 69F.1

<400> 45

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atg cag ttg cac gac cat atg aag tac ata gac ttg ggt tgc aag atg   48
Met Gln Leu His Asp His Met Lys Tyr Ile Asp Leu Gly Cys Lys Met
  1               5                  10                  15

gca tgc ata cca aga tat caa tgg aaa gga cgc cct act gaa aga cag   96
Ala Cys Ile Pro Arg Tyr Gln Trp Lys Gly Arg Pro Thr Glu Arg Gln
             20                  25                  30

ttc tac gct tcg gag caa agg ata gtg ttc ctt ctt gga acc att tgc   144
Phe Tyr Ala Ser Glu Gln Arg Ile Val Phe Leu Leu Gly Thr Ile Cys
         35                  40                  45

cag ata ttc cag att act gga gtg ctt atc tat tgg tat tgc aat ggc   192
Gln Ile Phe Gln Ile Thr Gly Val Leu Ile Tyr Trp Tyr Cys Asn Gly
     50                  55                  60

cgt ctt gcc acg gaa acg ggc acc ttt gtg gca caa tta tct gaa atg   240
Arg Leu Ala Thr Glu Thr Gly Thr Phe Val Ala Gln Leu Ser Glu Met
```

```
 65                  70                  75                  80

tgc agt tct ttt tgt cta aca ttt gtg gga ttc tgt aac gtt tat gcg   288
Cys Ser Ser Phe Cys Leu Thr Phe Val Gly Phe Cys Asn Val Tyr Ala
                 85                  90                  95

atc tct aca aac cgc aat caa att gaa aca tta ctc gag gag ctt cat   336
Ile Ser Thr Asn Arg Asn Gln Ile Glu Thr Leu Leu Glu Glu Leu His
            100                 105                 110

cag ata tat ccg aga tac agg aaa aat cac tat cgc tgc cag cat tat   384
Gln Ile Tyr Pro Arg Tyr Arg Lys Asn His Tyr Arg Cys Gln His Tyr
        115                 120                 125

ttt gac atg gcc atg aca ata atg aga att gag ttt ctt ttc tat atg   432
Phe Asp Met Ala Met Thr Ile Met Arg Ile Glu Phe Leu Phe Tyr Met
    130                 135                 140

atc ttg tac gtg tac tac aat agt gca cca tta tgg gtg ctt ctt tgg   480
Ile Leu Tyr Val Tyr Tyr Asn Ser Ala Pro Leu Trp Val Leu Leu Trp
145                 150                 155                 160

gaa cac ttg cac gag gaa tat gat ctt agc ttc aag acg cag acc aac   528
Glu His Leu His Glu Glu Tyr Asp Leu Ser Phe Lys Thr Gln Thr Asn
                165                 170                 175

act tgg ttt cca tgg aaa gtc cat ggg tcg gca ctt gga ttt ggt atg   576
Thr Trp Phe Pro Trp Lys Val His Gly Ser Ala Leu Gly Phe Gly Met
            180                 185                 190

gct gta cta agc ata acc gtg gga tcc ttt gtg ggc gta ggt ttc agt   624
Ala Val Leu Ser Ile Thr Val Gly Ser Phe Val Gly Val Gly Phe Ser
        195                 200                 205

att gtc acc cag aat ctt atc tgt ttg tta acc ttc caa cta aag ttg   672
Ile Val Thr Gln Asn Leu Ile Cys Leu Leu Thr Phe Gln Leu Lys Leu
    210                 215                 220

cac tac gat gga ata tcc agt cag tta gta tct ctc gat tgc cgt cgt   720
His Tyr Asp Gly Ile Ser Ser Gln Leu Val Ser Leu Asp Cys Arg Arg
225                 230                 235                 240

cct gga gct cat aag gag ttg agc atc ctc atc gcc cac cac agc cga   768
Pro Gly Ala His Lys Glu Leu Ser Ile Leu Ile Ala His His Ser Arg
                245                 250                 255

atc ctt cag ctg ggc gac caa gtc aat gac ata atg aac ttt gta ttc   816
Ile Leu Gln Leu Gly Asp Gln Val Asn Asp Ile Met Asn Phe Val Phe
```

```
            260                 265                 270

ggc tct agc cta gta ggt gcc act att gcc att tgt atg tca agt gtt   864
Gly Ser Ser Leu Val Gly Ala Thr Ile Ala Ile Cys Met Ser Ser Val
        275                 280                 285

tct ata atg cta ctg gac tta gca tct gcc ttc aaa tat gcc agt ggt   912
Ser Ile Met Leu Leu Asp Leu Ala Ser Ala Phe Lys Tyr Ala Ser Gly
    290                 295                 300

cta gtg gca ttc gtc ctc tac aac ttt gtc atc tgc tac atg gga acc   960
Leu Val Ala Phe Val Leu Tyr Asn Phe Val Ile Cys Tyr Met Gly Thr
305                 310                 315                 320

gag gtc act tta gct cgt ata aag gtc ggt aat atg ggg caa ata cga   1008
Glu Val Thr Leu Ala Arg Ile Lys Val Gly Asn Met Gly Gln Ile Arg
                325                 330                 335

cag cca cgt ttt aga gca gga tgg aat ttg aga act act tta agt att   1056
Gln Pro Arg Phe Arg Ala Gly Trp Asn Leu Arg Thr Thr Leu Ser Ile
            340                 345                 350

ttg aca gca ttt tgc gtc tgg cga tgt ttc cac gag gaa gat ttg tat   1104
Leu Thr Ala Phe Cys Val Trp Arg Cys Phe His Glu Glu Asp Leu Tyr
        355                 360                 365

cca acg ttt cga agg gca ttc ttt ttg cta ggt aac ttt tgc ctg gct   1152
Pro Thr Phe Arg Arg Ala Phe Phe Leu Leu Gly Asn Phe Cys Leu Ala
    370                 375                 380

tac caa tgt att gga gta att ata gat tgt ata gat tgg ttc ata tat   1200
Tyr Gln Cys Ile Gly Val Ile Ile Asp Cys Ile Asp Trp Phe Ile Tyr
385                 390                 395                 400

gga cgg aag gcg gtg gat acc caa aga ttc gtt gct gag atc tca gag   1248
Gly Arg Lys Ala Val Asp Thr Gln Arg Phe Val Ala Glu Ile Ser Glu
                405                 410                 415

gct aca ggt gct cgt cgc agt tgg att ttt                          1278
Ala Thr Gly Ala Arg Arg Ser Trp Ile Phe
            420                 425
```

<210> 46
<211> 426
<212> PRT
<213> Drosophila melanogaster

<400> 46

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Met Gln Leu His Asp His Met Lys Tyr Ile Asp Leu Gly Cys Lys Met
  1               5                  10                  15

Ala Cys Ile Pro Arg Tyr Gln Trp Lys Gly Arg Pro Thr Glu Arg Gln
             20                  25                  30

Phe Tyr Ala Ser Glu Gln Arg Ile Val Phe Leu Leu Gly Thr Ile Cys
         35                  40                  45

Gln Ile Phe Gln Ile Thr Gly Val Leu Ile Tyr Trp Tyr Cys Asn Gly
     50                  55                  60

Arg Leu Ala Thr Glu Thr Gly Thr Phe Val Ala Gln Leu Ser Glu Met
 65                  70                  75                  80

Cys Ser Ser Phe Cys Leu Thr Phe Val Gly Phe Cys Asn Val Tyr Ala
                 85                  90                  95

Ile Ser Thr Asn Arg Asn Gln Ile Glu Thr Leu Leu Glu Glu Leu His
            100                 105                 110

Gln Ile Tyr Pro Arg Tyr Arg Lys Asn His Tyr Arg Cys Gln His Tyr
        115                 120                 125

Phe Asp Met Ala Met Thr Ile Met Arg Ile Glu Phe Leu Phe Tyr Met
    130                 135                 140

Ile Leu Tyr Val Tyr Tyr Asn Ser Ala Pro Leu Trp Val Leu Leu Trp
145                 150                 155                 160

Glu His Leu His Glu Glu Tyr Asp Leu Ser Phe Lys Thr Gln Thr Asn
                165                 170                 175

Thr Trp Phe Pro Trp Lys Val His Gly Ser Ala Leu Gly Phe Gly Met
            180                 185                 190

Ala Val Leu Ser Ile Thr Val Gly Ser Phe Val Gly Val Gly Phe Ser
        195                 200                 205

Ile Val Thr Gln Asn Leu Ile Cys Leu Leu Thr Phe Gln Leu Lys Leu
    210                 215                 220

His Tyr Asp Gly Ile Ser Ser Gln Leu Val Ser Leu Asp Cys Arg Arg
225                 230                 235                 240

Pro Gly Ala His Lys Glu Leu Ser Ile Leu Ile Ala His His Ser Arg
                245                 250                 255
```

```
Ile Leu Gln Leu Gly Asp Gln Val Asn Asp Ile Met Asn Phe Val Phe
            260                 265                 270

Gly Ser Ser Leu Val Gly Ala Thr Ile Ala Ile Cys Met Ser Ser Val
        275                 280                 285

Ser Ile Met Leu Leu Asp Leu Ala Ser Ala Phe Lys Tyr Ala Ser Gly
    290                 295                 300

Leu Val Ala Phe Val Leu Tyr Asn Phe Val Ile Cys Tyr Met Gly Thr
305                 310                 315                 320

Glu Val Thr Leu Ala Arg Ile Lys Val Gly Asn Met Gly Gln Ile Arg
                325                 330                 335

Gln Pro Arg Phe Arg Ala Gly Trp Asn Leu Arg Thr Thr Leu Ser Ile
            340                 345                 350

Leu Thr Ala Phe Cys Val Trp Arg Cys Phe His Glu Glu Asp Leu Tyr
        355                 360                 365

Pro Thr Phe Arg Arg Ala Phe Phe Leu Leu Gly Asn Phe Cys Leu Ala
    370                 375                 380

Tyr Gln Cys Ile Gly Val Ile Ile Asp Cys Ile Asp Trp Phe Ile Tyr
385                 390                 395                 400

Gly Arg Lys Ala Val Asp Thr Gln Arg Phe Val Ala Glu Ile Ser Glu
                405                 410                 415

Ala Thr Gly Ala Arg Arg Ser Trp Ile Phe
            420                 425
```

<210> 47
<211> 1242
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1242)
<223> DOR 69F.2

<400> 47
atg cag ttg gag gac ttt atg cgg tac ccg gac ctc gtg tgt caa gcg 48

```
Met Gln Leu Glu Asp Phe Met Arg Tyr Pro Asp Leu Val Cys Gln Ala
  1               5                  10                  15

gcc caa ctt ccc aga tac acg tgg aat ggc aga cga tcc ttg gaa gtt   96
Ala Gln Leu Pro Arg Tyr Thr Trp Asn Gly Arg Arg Ser Leu Glu Val
             20                  25                  30

aaa cgc aac ttg gca aaa cgc att atc ttc tgg ctt gga gca gta aat   144
Lys Arg Asn Leu Ala Lys Arg Ile Ile Phe Trp Leu Gly Ala Val Asn
         35                  40                  45

ttg gtt tat cac aat att ggc tgc gtc atg tat ggc tat ttc ggt gat   192
Leu Val Tyr His Asn Ile Gly Cys Val Met Tyr Gly Tyr Phe Gly Asp
     50                  55                  60

gga aga aca aag gat cca att gcg tat tta gct gaa ttg gca tct gtg   240
Gly Arg Thr Lys Asp Pro Ile Ala Tyr Leu Ala Glu Leu Ala Ser Val
 65                  70                  75                  80

gcc agc atg ctt ggt ttc acc att gtg ggc acc ctc aac ttg tgg aag   288
Ala Ser Met Leu Gly Phe Thr Ile Val Gly Thr Leu Asn Leu Trp Lys
                 85                  90                  95

atg ctg agc ctt aag acc cat ttt gag aac cta cta aat gaa ttc gag   336
Met Leu Ser Leu Lys Thr His Phe Glu Asn Leu Leu Asn Glu Phe Glu
            100                 105                 110

gaa tta ttt caa cta atc aag cac agg gcg tat cgc ata cac cac tat   384
Glu Leu Phe Gln Leu Ile Lys His Arg Ala Tyr Arg Ile His His Tyr
        115                 120                 125

caa gaa aag tat acg cgt cat ata cga aat aca ttt att ttc cat acc   432
Gln Glu Lys Tyr Thr Arg His Ile Arg Asn Thr Phe Ile Phe His Thr
    130                 135                 140

tct gcc gtt gtc tac tac aac tca cta cca att ctt cta atg att cgg   480
Ser Ala Val Val Tyr Tyr Asn Ser Leu Pro Ile Leu Leu Met Ile Arg
145                 150                 155                 160

gaa cat ttc tcg aac tca cag cag ttg ggc tat aga att cag agt aat   528
Glu His Phe Ser Asn Ser Gln Gln Leu Gly Tyr Arg Ile Gln Ser Asn
                165                 170                 175

acc tgg tat ccc tgg cag gtt cag gga tca att cct gga ttt ttt gct   576
Thr Trp Tyr Pro Trp Gln Val Gln Gly Ser Ile Pro Gly Phe Phe Ala
            180                 185                 190

gca gtc gcc tgt caa atc ttt tcg tgc caa acc aat atg tgc gtc aat   624
```

```
Ala Val Ala Cys Gln Ile Phe Ser Cys Gln Thr Asn Met Cys Val Asn
        195                 200                 205

atg ttt atc cag ttt ctg atc aac ttt ttt ggt atc cag cta gaa ata   672
Met Phe Ile Gln Phe Leu Ile Asn Phe Phe Gly Ile Gln Leu Glu Ile
    210                 215                 220

cac ttc gat ggt ttg gcc agg cag ctg gag acc atc gat gcc cgc aat   720
His Phe Asp Gly Leu Ala Arg Gln Leu Glu Thr Ile Asp Ala Arg Asn
225                 230                 235                 240

ccc cat gcc aag gat caa ttg aag tat ctg att gta tat cac aca aaa   768
Pro His Ala Lys Asp Gln Leu Lys Tyr Leu Ile Val Tyr His Thr Lys
                245                 250                 255

ttg ctt aat cta gcc gac aga gtt aat cga tcg ttt aac ttt acg ttt   816
Leu Leu Asn Leu Ala Asp Arg Val Asn Arg Ser Phe Asn Phe Thr Phe
            260                 265                 270

ctc ata agt ctg tcg gta tcc atg ata tcc aac tgt ttt ctg gca ttt   864
Leu Ile Ser Leu Ser Val Ser Met Ile Ser Asn Cys Phe Leu Ala Phe
        275                 280                 285

tcc atg acc atg ttc gac ttt ggc acc tct cta aaa cat tta ctc gga   912
Ser Met Thr Met Phe Asp Phe Gly Thr Ser Leu Lys His Leu Leu Gly
    290                 295                 300

ctt ttg cta ttc atc aca tat aat ttt tca atg tgc cgc agt ggt acg   960
Leu Leu Leu Phe Ile Thr Tyr Asn Phe Ser Met Cys Arg Ser Gly Thr
305                 310                 315                 320

cac ttg att tta acg agt ggc aaa gta ttg cca gcg gcc ttt tat aac   1008
His Leu Ile Leu Thr Ser Gly Lys Val Leu Pro Ala Ala Phe Tyr Asn
                325                 330                 335

aat tgg tat gaa ggc gat ctt gtt tat cga agg atg ctc ctc atc ctg   1056
Asn Trp Tyr Glu Gly Asp Leu Val Tyr Arg Arg Met Leu Leu Ile Leu
            340                 345                 350

atg atg cgt gct acg aaa cct tat atg tgg aaa acc tac aag ctg gca   1104
Met Met Arg Ala Thr Lys Pro Tyr Met Trp Lys Thr Tyr Lys Leu Ala
        355                 360                 365

cct gta tcc ata act aca tat atg gca gtg agt ttt tcc tta ctt aca   1152
Pro Val Ser Ile Thr Thr Tyr Met Ala Val Ser Phe Ser Leu Leu Thr
    370                 375                 380

tgg cat tta tta ttc aat ttt aat tca tgt gtt ggc ttt cag aca ttg   1200
```

```
Trp His Leu Leu Phe Asn Phe Asn Ser Cys Val Gly Phe Gln Thr Leu
385                 390                 395                 400

aag ttt tca tat caa atg ttt acc tgt gtg cgg tcc ctt aaa          1242
Lys Phe Ser Tyr Gln Met Phe Thr Cys Val Arg Ser Leu Lys
                405                 410
```

<210> 48
<211> 414
<212> PRT
<213> Drosophila melanogaster

<400> 48

```
Met Gln Leu Glu Asp Phe Met Arg Tyr Pro Asp Leu Val Cys Gln Ala
  1               5                  10                  15

Ala Gln Leu Pro Arg Tyr Thr Trp Asn Gly Arg Arg Ser Leu Glu Val
             20                  25                  30

Lys Arg Asn Leu Ala Lys Arg Ile Ile Phe Trp Leu Gly Ala Val Asn
         35                  40                  45

Leu Val Tyr His Asn Ile Gly Cys Val Met Tyr Gly Tyr Phe Gly Asp
     50                  55                  60

Gly Arg Thr Lys Asp Pro Ile Ala Tyr Leu Ala Glu Leu Ala Ser Val
 65                  70                  75                  80

Ala Ser Met Leu Gly Phe Thr Ile Val Gly Thr Leu Asn Leu Trp Lys
                 85                  90                  95

Met Leu Ser Leu Lys Thr His Phe Glu Asn Leu Leu Asn Glu Phe Glu
            100                 105                 110

Glu Leu Phe Gln Leu Ile Lys His Arg Ala Tyr Arg Ile His His Tyr
        115                 120                 125

Gln Glu Lys Tyr Thr Arg His Ile Arg Asn Thr Phe Ile Phe His Thr
    130                 135                 140

Ser Ala Val Val Tyr Tyr Asn Ser Leu Pro Ile Leu Leu Met Ile Arg
145                 150                 155                 160

Glu His Phe Ser Asn Ser Gln Gln Leu Gly Tyr Arg Ile Gln Ser Asn
                165                 170                 175

Thr Trp Tyr Pro Trp Gln Val Gln Gly Ser Ile Pro Gly Phe Phe Ala
```

```
            180                 185                 190

Ala Val Ala Cys Gln Ile Phe Ser Cys Gln Thr Asn Met Cys Val Asn
        195                 200                 205

Met Phe Ile Gln Phe Leu Ile Asn Phe Phe Gly Ile Gln Leu Glu Ile
    210                 215                 220

His Phe Asp Gly Leu Ala Arg Gln Leu Glu Thr Ile Asp Ala Arg Asn
225                 230                 235                 240

Pro His Ala Lys Asp Gln Leu Lys Tyr Leu Ile Val Tyr His Thr Lys
                245                 250                 255

Leu Leu Asn Leu Ala Asp Arg Val Asn Arg Ser Phe Asn Phe Thr Phe
            260                 265                 270

Leu Ile Ser Leu Ser Val Ser Met Ile Ser Asn Cys Phe Leu Ala Phe
        275                 280                 285

Ser Met Thr Met Phe Asp Phe Gly Thr Ser Leu Lys His Leu Leu Gly
    290                 295                 300

Leu Leu Leu Phe Ile Thr Tyr Asn Phe Ser Met Cys Arg Ser Gly Thr
305                 310                 315                 320

His Leu Ile Leu Thr Ser Gly Lys Val Leu Pro Ala Ala Phe Tyr Asn
                325                 330                 335

Asn Trp Tyr Glu Gly Asp Leu Val Tyr Arg Arg Met Leu Leu Ile Leu
            340                 345                 350

Met Met Arg Ala Thr Lys Pro Tyr Met Trp Lys Thr Tyr Lys Leu Ala
        355                 360                 365

Pro Val Ser Ile Thr Thr Tyr Met Ala Val Ser Phe Ser Leu Leu Thr
    370                 375                 380

Trp His Leu Leu Phe Asn Phe Asn Ser Cys Val Gly Phe Gln Thr Leu
385                 390                 395                 400

Lys Phe Ser Tyr Gln Met Phe Thr Cys Val Arg Ser Leu Lys
                405                 410
```

<210> 49
<211> 1170

<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1170)
<223> DOR 85A.1

<400> 49
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atg gaa gag cta atg aag tac gct agc ttc ttt aca cag cag tgg gca   48
Met Glu Glu Leu Met Lys Tyr Ala Ser Phe Phe Thr Gln Gln Trp Ala
  1               5                  10                  15

tac ggg cat ata cca atg ggt gaa gaa tcc aaa agg aac aaa ctt ata   96
Tyr Gly His Ile Pro Met Gly Glu Glu Ser Lys Arg Asn Lys Leu Ile
             20                  25                  30

ttt cac ata gtt ttt tgg tcc aat gtg att aac ctg agc ttc gtt gga   144
Phe His Ile Val Phe Trp Ser Asn Val Ile Asn Leu Ser Phe Val Gly
         35                  40                  45

tta ttt gag agc att tac gtt tac agt gcc ttc atg gat aat aag ttc   192
Leu Phe Glu Ser Ile Tyr Val Tyr Ser Ala Phe Met Asp Asn Lys Phe
     50                  55                  60

ctg gaa gca gtc act gcg ttg tcc tac att ggc ttc gta acc gta ggc   240
Leu Glu Ala Val Thr Ala Leu Ser Tyr Ile Gly Phe Val Thr Val Gly
 65                  70                  75                  80

atg agc aag atg ttc ttc atc cgg tgg aag aaa acg gct ata act gaa   288
Met Ser Lys Met Phe Phe Ile Arg Trp Lys Lys Thr Ala Ile Thr Glu
                 85                  90                  95

ctg att aat gaa ttg aag gag atc tat ccg aat ggt ttg atc cga gag   336
Leu Ile Asn Glu Leu Lys Glu Ile Tyr Pro Asn Gly Leu Ile Arg Glu
            100                 105                 110

gaa aga tac aat ctg ccg atg tat ctg ggc acc tgc tcc aga atc agc   384
Glu Arg Tyr Asn Leu Pro Met Tyr Leu Gly Thr Cys Ser Arg Ile Ser
        115                 120                 125

ctt ata tat tcc ttg ctc tac tct gtt ctc atc tgg aca ttc aac ttg   432
Leu Ile Tyr Ser Leu Leu Tyr Ser Val Leu Ile Trp Thr Phe Asn Leu
    130                 135                 140

ttt tgt gta atg gag tat tgg gtc tat gac aag tgg ctc aac att cga   480
Phe Cys Val Met Glu Tyr Trp Val Tyr Asp Lys Trp Leu Asn Ile Arg
145                 150                 155                 160
```

```
gtg gtg ggc aaa cag ttg ccg tac ctc atg tac att cct tgg aaa tgg   528
Val Val Gly Lys Gln Leu Pro Tyr Leu Met Tyr Ile Pro Trp Lys Trp
                165                 170                 175

cag gat aac tgg tcg tac tat cca ctg tta ttc tcc cag aat ttt gca   576
Gln Asp Asn Trp Ser Tyr Tyr Pro Leu Leu Phe Ser Gln Asn Phe Ala
            180                 185                 190

gga tac aca tct gca gct ggt caa att tca acc gat gtc ttg ctc tgc   624
Gly Tyr Thr Ser Ala Ala Gly Gln Ile Ser Thr Asp Val Leu Leu Cys
        195                 200                 205

gcg gtg gcc act cag ttg gta atg cac ttc gac ttt ctc tca aat agt   672
Ala Val Ala Thr Gln Leu Val Met His Phe Asp Phe Leu Ser Asn Ser
    210                 215                 220

atg gaa cgc cac gaa ttg agt gga gat tgg aag aag gac tcc cga ttt   720
Met Glu Arg His Glu Leu Ser Gly Asp Trp Lys Lys Asp Ser Arg Phe
225                 230                 235                 240

ctg gtg gac att gtt agg tat cac gaa cgt ata ctc cgc ctt tca gat   768
Leu Val Asp Ile Val Arg Tyr His Glu Arg Ile Leu Arg Leu Ser Asp
                245                 250                 255

gca gtg aac gat ata ttt gga att cca cta cta ctc aac ttc atg gta   816
Ala Val Asn Asp Ile Phe Gly Ile Pro Leu Leu Leu Asn Phe Met Val
            260                 265                 270

tcc tcg ttc gtc atc tgc ttc gtg gga ttc cag atg act gtt gga gtt   864
Ser Ser Phe Val Ile Cys Phe Val Gly Phe Gln Met Thr Val Gly Val
        275                 280                 285

ccg ccg gat ata gtt gtg aag ctc ttc ctc ttc ctt gtc tct tcg atg   912
Pro Pro Asp Ile Val Val Lys Leu Phe Leu Phe Leu Val Ser Ser Met
    290                 295                 300

agt cag gtc tat ttg att tgt cac tat ggt caa ctg gtg gcc gat gct   960
Ser Gln Val Tyr Leu Ile Cys His Tyr Gly Gln Leu Val Ala Asp Ala
305                 310                 315                 320

agc tac gga ttt tcg gtt gcc acc tac aat cag aag tgg tat aaa gcc   1008
Ser Tyr Gly Phe Ser Val Ala Thr Tyr Asn Gln Lys Trp Tyr Lys Ala
                325                 330                 335

gat gtg cgc tat aaa cga gcc ttg gtt att att ata gct aga tcg cag   1056
Asp Val Arg Tyr Lys Arg Ala Leu Val Ile Ile Ile Ala Arg Ser Gln
            340                 345                 350
```

```
aag gta act ttt cta aag gcc act ata ttc ttg gat att acc agg tcc   1104
Lys Val Thr Phe Leu Lys Ala Thr Ile Phe Leu Asp Ile Thr Arg Ser
        355                 360                 365

act atg aca gat ctg ctt caa ata tca tac aaa ttc ttc gcc ctg ctg   1152
Thr Met Thr Asp Leu Leu Gln Ile Ser Tyr Lys Phe Phe Ala Leu Leu
    370                 375                 380

cgc aca atg tat acc caa                                        1170
Arg Thr Met Tyr Thr Gln
385                 390
```

<210> 50
<211> 390
<212> PRT
<213> Drosophila melanogaster

<400> 50

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Met Glu Glu Leu Met Lys Tyr Ala Ser Phe Phe Thr Gln Gln Trp Ala
  1               5                  10                  15

Tyr Gly His Ile Pro Met Gly Glu Glu Ser Lys Arg Asn Lys Leu Ile
             20                  25                  30

Phe His Ile Val Phe Trp Ser Asn Val Ile Asn Leu Ser Phe Val Gly
         35                  40                  45

Leu Phe Glu Ser Ile Tyr Val Tyr Ser Ala Phe Met Asp Asn Lys Phe
     50                  55                  60

Leu Glu Ala Val Thr Ala Leu Ser Tyr Ile Gly Phe Val Thr Val Gly
 65                  70                  75                  80

Met Ser Lys Met Phe Phe Ile Arg Trp Lys Lys Thr Ala Ile Thr Glu
                 85                  90                  95

Leu Ile Asn Glu Leu Lys Glu Ile Tyr Pro Asn Gly Leu Ile Arg Glu
            100                 105                 110

Glu Arg Tyr Asn Leu Pro Met Tyr Leu Gly Thr Cys Ser Arg Ile Ser
        115                 120                 125

Leu Ile Tyr Ser Leu Leu Tyr Ser Val Leu Ile Trp Thr Phe Asn Leu
    130                 135                 140

Phe Cys Val Met Glu Tyr Trp Val Tyr Asp Lys Trp Leu Asn Ile Arg
```

```
145                 150                 155                 160

Val Val Gly Lys Gln Leu Pro Tyr Leu Met Tyr Ile Pro Trp Lys Trp
                165                 170                 175

Gln Asp Asn Trp Ser Tyr Tyr Pro Leu Leu Phe Ser Gln Asn Phe Ala
            180                 185                 190

Gly Tyr Thr Ser Ala Ala Gly Gln Ile Ser Thr Asp Val Leu Leu Cys
        195                 200                 205

Ala Val Ala Thr Gln Leu Val Met His Phe Asp Phe Leu Ser Asn Ser
    210                 215                 220

Met Glu Arg His Glu Leu Ser Gly Asp Trp Lys Lys Asp Ser Arg Phe
225                 230                 235                 240

Leu Val Asp Ile Val Arg Tyr His Glu Arg Ile Leu Arg Leu Ser Asp
                245                 250                 255

Ala Val Asn Asp Ile Phe Gly Ile Pro Leu Leu Leu Asn Phe Met Val
            260                 265                 270

Ser Ser Phe Val Ile Cys Phe Val Gly Phe Gln Met Thr Val Gly Val
        275                 280                 285

Pro Pro Asp Ile Val Val Lys Leu Phe Leu Phe Leu Val Ser Ser Met
    290                 295                 300

Ser Gln Val Tyr Leu Ile Cys His Tyr Gly Gln Leu Val Ala Asp Ala
305                 310                 315                 320

Ser Tyr Gly Phe Ser Val Ala Thr Tyr Asn Gln Lys Trp Tyr Lys Ala
                325                 330                 335

Asp Val Arg Tyr Lys Arg Ala Leu Val Ile Ile Ile Ala Arg Ser Gln
            340                 345                 350

Lys Val Thr Phe Leu Lys Ala Thr Ile Phe Leu Asp Ile Thr Arg Ser
        355                 360                 365

Thr Met Thr Asp Leu Leu Gln Ile Ser Tyr Lys Phe Phe Ala Leu Leu
    370                 375                 380

Arg Thr Met Tyr Thr Gln
385                 390
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<210> 51
<211> 1167
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1167)
<223> DOR 85A.3

<400> 51

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atg aag ttc atg aag tac gca gtt ttc ttt tac aca tcg gtg ggc att   48
Met Lys Phe Met Lys Tyr Ala Val Phe Phe Tyr Thr Ser Val Gly Ile
  1               5                  10                  15

gag ccg tat acg att gac tcg cgg tcc aaa aaa gcg agc cta tgg tca   96
Glu Pro Tyr Thr Ile Asp Ser Arg Ser Lys Lys Ala Ser Leu Trp Ser
             20                  25                  30

cat ctt ctc ttc tgg gcc aat gtg atc aat tta agt gtc att gtt ttc   144
His Leu Leu Phe Trp Ala Asn Val Ile Asn Leu Ser Val Ile Val Phe
         35                  40                  45

gga gag atc ctc tat ctg gga gtg gcc tat tcc gat gga aag ttc att   192
Gly Glu Ile Leu Tyr Leu Gly Val Ala Tyr Ser Asp Gly Lys Phe Ile
     50                  55                  60

gat gcc gtc act gta ctg tca tat atc gga ttc gta atc gtg ggc atg   240
Asp Ala Val Thr Val Leu Ser Tyr Ile Gly Phe Val Ile Val Gly Met
 65                  70                  75                  80

agc aag atg ttc ttc ata tgg tgg aag aag acc gat cta agc gat ttg   288
Ser Lys Met Phe Phe Ile Trp Trp Lys Lys Thr Asp Leu Ser Asp Leu
                 85                  90                  95

gtt aag gaa ttg gag cac atc tat cca aat ggc aaa gct gag gag gag   336
Val Lys Glu Leu Glu His Ile Tyr Pro Asn Gly Lys Ala Glu Glu Glu
            100                 105                 110

atg tat cgg ttg gat agg tat ctg cga tct tgt tca cga att agc att   384
Met Tyr Arg Leu Asp Arg Tyr Leu Arg Ser Cys Ser Arg Ile Ser Ile
        115                 120                 125

acc tat gca cta ctc tac tcc gta ctc atc tgg acc ttc aat ctg ttc   432
Thr Tyr Ala Leu Leu Tyr Ser Val Leu Ile Trp Thr Phe Asn Leu Phe
    130                 135                 140
```

```
agt atc atg caa ttc ctt gtc tat gaa aag ttg ctt aaa atc cga gtg   480
Ser Ile Met Gln Phe Leu Val Tyr Glu Lys Leu Leu Lys Ile Arg Val
145                 150                 155                 160

gtc ggc caa acg ctg cca tat ttg atg tac ttt ccc tgg aac tgg cat   528
Val Gly Gln Thr Leu Pro Tyr Leu Met Tyr Phe Pro Trp Asn Trp His
                165                 170                 175

gaa aac tgg acg tat tat gtg ctg ctg ttc tgt caa aac ttc gca gga   576
Glu Asn Trp Thr Tyr Tyr Val Leu Leu Phe Cys Gln Asn Phe Ala Gly
            180                 185                 190

cat act tcg gca tcg gga cag atc tct acg gat ctt ttg ctt tgt gct   624
His Thr Ser Ala Ser Gly Gln Ile Ser Thr Asp Leu Leu Leu Cys Ala
        195                 200                 205

gtt gct acc cag gtg gta atg cac ttc gat tac ttg gcc aga gtg gtg   672
Val Ala Thr Gln Val Val Met His Phe Asp Tyr Leu Ala Arg Val Val
    210                 215                 220

gaa aaa caa gtg tta gat cgc gat tgg agc gaa aac tcc aga ttt ttg   720
Glu Lys Gln Val Leu Asp Arg Asp Trp Ser Glu Asn Ser Arg Phe Leu
225                 230                 235                 240

gca aaa act gta caa tat cat cag cgc att ctt cgg cta atg gac gtt   768
Ala Lys Thr Val Gln Tyr His Gln Arg Ile Leu Arg Leu Met Asp Val
                245                 250                 255

ctc aac gat ata ttc ggg ata ccg cta ctg ctt aac ttt atg gtc tcc   816
Leu Asn Asp Ile Phe Gly Ile Pro Leu Leu Leu Asn Phe Met Val Ser
            260                 265                 270

aca ttt gtc atc tgc ttt gtg gga ttc caa atg acc gtg ggt gtc ccg   864
Thr Phe Val Ile Cys Phe Val Gly Phe Gln Met Thr Val Gly Val Pro
        275                 280                 285

ccg gac atc atg att aag ctc ttc ttg ttc ctg ttc tcg tcc ttg tcg   912
Pro Asp Ile Met Ile Lys Leu Phe Leu Phe Leu Phe Ser Ser Leu Ser
    290                 295                 300

caa gtg tac ttg ata tgc cac tac ggc cag ctg att gcc gat gcg agc   960
Gln Val Tyr Leu Ile Cys His Tyr Gly Gln Leu Ile Ala Asp Ala Ser
305                 310                 315                 320

tct agc tta tcg att tct gca tat aag cag aat tgg caa aat gct gac   1008
Ser Ser Leu Ser Ile Ser Ala Tyr Lys Gln Asn Trp Gln Asn Ala Asp
                325                 330                 335
```

```
att cgc tat cgt cgg gct ctg gta ttc ttt ata gct cga cct cag agg   1056
Ile Arg Tyr Arg Arg Ala Leu Val Phe Phe Ile Ala Arg Pro Gln Arg
            340                 345                 350

aca act tat cta aaa gct aca att ttc atg aat ata aca agg gcc acc   1104
Thr Thr Tyr Leu Lys Ala Thr Ile Phe Met Asn Ile Thr Arg Ala Thr
        355                 360                 365

atg acg gac ctt ctt caa gta tcc tac aaa ttt ttc gct ctg ctt cgt   1152
Met Thr Asp Leu Leu Gln Val Ser Tyr Lys Phe Phe Ala Leu Leu Arg
    370                 375                 380

acc atg tac ata aag                                             1167
Thr Met Tyr Ile Lys
385
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<210> 52
<211> 389
<212> PRT
<213> Drosophila melanogaster

<400> 52

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Met Lys Phe Met Lys Tyr Ala Val Phe Phe Tyr Thr Ser Val Gly Ile
  1               5                  10                  15

Glu Pro Tyr Thr Ile Asp Ser Arg Ser Lys Lys Ala Ser Leu Trp Ser
             20                  25                  30

His Leu Leu Phe Trp Ala Asn Val Ile Asn Leu Ser Val Ile Val Phe
         35                  40                  45

Gly Glu Ile Leu Tyr Leu Gly Val Ala Tyr Ser Asp Gly Lys Phe Ile
     50                  55                  60

Asp Ala Val Thr Val Leu Ser Tyr Ile Gly Phe Val Ile Val Gly Met
 65                  70                  75                  80

Ser Lys Met Phe Phe Ile Trp Trp Lys Lys Thr Asp Leu Ser Asp Leu
                85                  90                  95

Val Lys Glu Leu Glu His Ile Tyr Pro Asn Gly Lys Ala Glu Glu Glu
            100                 105                 110

Met Tyr Arg Leu Asp Arg Tyr Leu Arg Ser Cys Ser Arg Ile Ser Ile
        115                 120                 125

Thr Tyr Ala Leu Leu Tyr Ser Val Leu Ile Trp Thr Phe Asn Leu Phe
```

```
    130                 135                 140

Ser Ile Met Gln Phe Leu Val Tyr Glu Lys Leu Leu Lys Ile Arg Val
145                 150                 155                 160

Val Gly Gln Thr Leu Pro Tyr Leu Met Tyr Phe Pro Trp Asn Trp His
                165                 170                 175

Glu Asn Trp Thr Tyr Tyr Val Leu Leu Phe Cys Gln Asn Phe Ala Gly
            180                 185                 190

His Thr Ser Ala Ser Gly Gln Ile Ser Thr Asp Leu Leu Leu Cys Ala
        195                 200                 205

Val Ala Thr Gln Val Val Met His Phe Asp Tyr Leu Ala Arg Val Val
    210                 215                 220

Glu Lys Gln Val Leu Asp Arg Asp Trp Ser Glu Asn Ser Arg Phe Leu
225                 230                 235                 240

Ala Lys Thr Val Gln Tyr His Gln Arg Ile Leu Arg Leu Met Asp Val
                245                 250                 255

Leu Asn Asp Ile Phe Gly Ile Pro Leu Leu Leu Asn Phe Met Val Ser
            260                 265                 270

Thr Phe Val Ile Cys Phe Val Gly Phe Gln Met Thr Val Gly Val Pro
        275                 280                 285

Pro Asp Ile Met Ile Lys Leu Phe Leu Phe Leu Phe Ser Ser Leu Ser
    290                 295                 300

Gln Val Tyr Leu Ile Cys His Tyr Gly Gln Leu Ile Ala Asp Ala Ser
305                 310                 315                 320

Ser Ser Leu Ser Ile Ser Ala Tyr Lys Gln Asn Trp Gln Asn Ala Asp
                325                 330                 335

Ile Arg Tyr Arg Arg Ala Leu Val Phe Phe Ile Ala Arg Pro Gln Arg
            340                 345                 350

Thr Thr Tyr Leu Lys Ala Thr Ile Phe Met Asn Ile Thr Arg Ala Thr
        355                 360                 365

Met Thr Asp Leu Leu Gln Val Ser Tyr Lys Phe Phe Ala Leu Leu Arg
    370                 375                 380

Thr Met Tyr Ile Lys
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385

<210> 53
<211> 1305
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1305)
<223> DOR 85B.1

<400> 53
atg gga ctc cag ttg gcg aat ggc acg aag cca tcg ccg cgg tta ccc 48
Met Gly Leu Gln Leu Ala Asn Gly Thr Lys Pro Ser Pro Arg Leu Pro
1 5 10 15

aaa tgg tgg cca aag cgg ctg gaa atg att ggt aaa gtg ctg ccc aaa 96
Lys Trp Trp Pro Lys Arg Leu Glu Met Ile Gly Lys Val Leu Pro Lys
20 25 30

gcc tat tgt tcc atg gtg att ttc acc tcc ctg cat ttg ggt gtc ctg 144
Ala Tyr Cys Ser Met Val Ile Phe Thr Ser Leu His Leu Gly Val Leu
35 40 45

ttc acg aaa acc aca ctg gat gtc ctg ccg acg ggg gag ctg cag gcc 192
Phe Thr Lys Thr Thr Leu Asp Val Leu Pro Thr Gly Glu Leu Gln Ala
50 55 60

ata acg gat gcc ctc acc atg acc ata ata tac ttt ttc acg ggc tac 240
Ile Thr Asp Ala Leu Thr Met Thr Ile Ile Tyr Phe Phe Thr Gly Tyr
65 70 75 80

ggc acc atc tac tgg tgc ctg cgc tcc cgg cgc ctc ttg gcc tac atg 288
Gly Thr Ile Tyr Trp Cys Leu Arg Ser Arg Arg Leu Leu Ala Tyr Met
85 90 95

gag cac atg aac cgg gag tat cgc cat cat tcg ctg gcc ggg gtg acc 336
Glu His Met Asn Arg Glu Tyr Arg His His Ser Leu Ala Gly Val Thr
100 105 110

ttt gtg agt agc cat gcg gcc ttt agg atg tcc aga aac ttc acg gtg 384
Phe Val Ser Ser His Ala Ala Phe Arg Met Ser Arg Asn Phe Thr Val
115 120 125

gtg tgg ata atg tcc tgc ctg ctg ggc gtg att tcc tgg ggc gtt tcg 432

```
Val Trp Ile Met Ser Cys Leu Leu Gly Val Ile Ser Trp Gly Val Ser
    130                 135                 140

cca ctg atg ctg ggc atc cgg atg ctg ccg ctc caa tgt tgg tat ccc   480
Pro Leu Met Leu Gly Ile Arg Met Leu Pro Leu Gln Cys Trp Tyr Pro
145                 150                 155                 160

ttc gac gcc ctg ggt ccc ggc aca tat acg gcg gtc tat gct aca caa   528
Phe Asp Ala Leu Gly Pro Gly Thr Tyr Thr Ala Val Tyr Ala Thr Gln
                165                 170                 175

ctt ttc ggt cag atc atg gtg ggc atg acc ttt gga ttc ggg gga tca   576
Leu Phe Gly Gln Ile Met Val Gly Met Thr Phe Gly Phe Gly Gly Ser
            180                 185                 190

ctg ttt gtc acc ctg agc ctg cta ctc ctg gga caa ttc gat gtg ctc   624
Leu Phe Val Thr Leu Ser Leu Leu Leu Leu Gly Gln Phe Asp Val Leu
        195                 200                 205

tac tgc agc ctg aag aac ctg gat gcc cat acc aag ttg ctg ggc ggg   672
Tyr Cys Ser Leu Lys Asn Leu Asp Ala His Thr Lys Leu Leu Gly Gly
    210                 215                 220

gag tct gta aat ggc ctg agt tcg ctg caa gag gag ttg ctg ctg ggg   720
Glu Ser Val Asn Gly Leu Ser Ser Leu Gln Glu Glu Leu Leu Leu Gly
225                 230                 235                 240

gac tcg aag agg gaa tta aat cag tac gtt ttg ctc cag gag cat ccg   768
Asp Ser Lys Arg Glu Leu Asn Gln Tyr Val Leu Leu Gln Glu His Pro
                245                 250                 255

acg gat ctg ctg aga ttg tcg gca gga cga aaa tgt cct gac caa gga   816
Thr Asp Leu Leu Arg Leu Ser Ala Gly Arg Lys Cys Pro Asp Gln Gly
            260                 265                 270

aat gcg ttt cac aac gcc ttg gtg gaa tgc att cgc ttg cat cgc ttc   864
Asn Ala Phe His Asn Ala Leu Val Glu Cys Ile Arg Leu His Arg Phe
        275                 280                 285

att ctg cac tgc tca cag gag ttg gag aat cta ttc agt cca tat tgt   912
Ile Leu His Cys Ser Gln Glu Leu Glu Asn Leu Phe Ser Pro Tyr Cys
    290                 295                 300

ctg gtc aag tca ctg cag atc acc ttt cag ctt tgc ctg ctg gtc ttt   960
Leu Val Lys Ser Leu Gln Ile Thr Phe Gln Leu Cys Leu Leu Val Phe
305                 310                 315                 320

gtg ggc gtt tcg ggt act cga gag gtc ctg cgg att gtc aac cag cta   1008
```

```
Val Gly Val Ser Gly Thr Arg Glu Val Leu Arg Ile Val Asn Gln Leu
                325                 330                 335

cag tac ttg gga ctg acc atc ttc gag ctc cta atg ttc acc tat tgt   1056
Gln Tyr Leu Gly Leu Thr Ile Phe Glu Leu Leu Met Phe Thr Tyr Cys
            340                 345                 350

ggc gaa ctc ctc agt cgg cat agt att cga tct ggc gac gcc ttt tgg   1104
Gly Glu Leu Leu Ser Arg His Ser Ile Arg Ser Gly Asp Ala Phe Trp
        355                 360                 365

agg ggt gcg tgg tgg aag cac gcc cat ttc atc cgc cag gac atc ctc   1152
Arg Gly Ala Trp Trp Lys His Ala His Phe Ile Arg Gln Asp Ile Leu
    370                 375                 380

atc ttt ctg gtc aat agt aga cgt gca gtt cac gtg act gcc ggc aag   1200
Ile Phe Leu Val Asn Ser Arg Arg Ala Val His Val Thr Ala Gly Lys
385                 390                 395                 400

ttt tat gtg atg gat gtg aat cgt cta aga tcg gtt ata acg cag gcg   1248
Phe Tyr Val Met Asp Val Asn Arg Leu Arg Ser Val Ile Thr Gln Ala
                405                 410                 415

ttc agc ttc ttg act ttg ctg caa aag ttg gct gcc aag aag acg gaa   1296
Phe Ser Phe Leu Thr Leu Leu Gln Lys Leu Ala Ala Lys Lys Thr Glu
            420                 425                 430

tcg gag ctc                                                      1305
Ser Glu Leu
        435
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<210> 54
<211> 435
<212> PRT
<213> Drosophila melanogaster

<400> 54

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Met Gly Leu Gln Leu Ala Asn Gly Thr Lys Pro Ser Pro Arg Leu Pro
  1               5                  10                  15

Lys Trp Trp Pro Lys Arg Leu Glu Met Ile Gly Lys Val Leu Pro Lys
             20                  25                  30

Ala Tyr Cys Ser Met Val Ile Phe Thr Ser Leu His Leu Gly Val Leu
         35                  40                  45

Phe Thr Lys Thr Thr Leu Asp Val Leu Pro Thr Gly Glu Leu Gln Ala
```

```
     50                  55                  60

Ile Thr Asp Ala Leu Thr Met Thr Ile Ile Tyr Phe Phe Thr Gly Tyr
 65                  70                  75                  80

Gly Thr Ile Tyr Trp Cys Leu Arg Ser Arg Arg Leu Leu Ala Tyr Met
                 85                  90                  95

Glu His Met Asn Arg Glu Tyr Arg His His Ser Leu Ala Gly Val Thr
            100                 105                 110

Phe Val Ser Ser His Ala Ala Phe Arg Met Ser Arg Asn Phe Thr Val
        115                 120                 125

Val Trp Ile Met Ser Cys Leu Leu Gly Val Ile Ser Trp Gly Val Ser
    130                 135                 140

Pro Leu Met Leu Gly Ile Arg Met Leu Pro Leu Gln Cys Trp Tyr Pro
145                 150                 155                 160

Phe Asp Ala Leu Gly Pro Gly Thr Tyr Thr Ala Val Tyr Ala Thr Gln
                165                 170                 175

Leu Phe Gly Gln Ile Met Val Gly Met Thr Phe Gly Phe Gly Gly Ser
            180                 185                 190

Leu Phe Val Thr Leu Ser Leu Leu Leu Leu Gly Gln Phe Asp Val Leu
        195                 200                 205

Tyr Cys Ser Leu Lys Asn Leu Asp Ala His Thr Lys Leu Leu Gly Gly
    210                 215                 220

Glu Ser Val Asn Gly Leu Ser Ser Leu Gln Glu Glu Leu Leu Leu Gly
225                 230                 235                 240

Asp Ser Lys Arg Glu Leu Asn Gln Tyr Val Leu Leu Gln Glu His Pro
                245                 250                 255

Thr Asp Leu Leu Arg Leu Ser Ala Gly Arg Lys Cys Pro Asp Gln Gly
            260                 265                 270

Asn Ala Phe His Asn Ala Leu Val Glu Cys Ile Arg Leu His Arg Phe
        275                 280                 285

Ile Leu His Cys Ser Gln Glu Leu Glu Asn Leu Phe Ser Pro Tyr Cys
    290                 295                 300

Leu Val Lys Ser Leu Gln Ile Thr Phe Gln Leu Cys Leu Leu Val Phe
```

```
305                 310                 315                 320

Val Gly Val Ser Gly Thr Arg Glu Val Leu Arg Ile Val Asn Gln Leu
                325                 330                 335

Gln Tyr Leu Gly Leu Thr Ile Phe Glu Leu Leu Met Phe Thr Tyr Cys
            340                 345                 350

Gly Glu Leu Leu Ser Arg His Ser Ile Arg Ser Gly Asp Ala Phe Trp
        355                 360                 365

Arg Gly Ala Trp Trp Lys His Ala His Phe Ile Arg Gln Asp Ile Leu
    370                 375                 380

Ile Phe Leu Val Asn Ser Arg Arg Ala Val His Val Thr Ala Gly Lys
385                 390                 395                 400

Phe Tyr Val Met Asp Val Asn Arg Leu Arg Ser Val Ile Thr Gln Ala
                405                 410                 415

Phe Ser Phe Leu Thr Leu Leu Gln Lys Leu Ala Ala Lys Lys Thr Glu
            420                 425                 430

Ser Glu Leu
        435
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<210> 55
<211> 1203
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1203)

<400> 55

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atg aag cca acg gaa atc aaa aaa ccc tat cga atg gag gag ttt ctg   48
Met Lys Pro Thr Glu Ile Lys Lys Pro Tyr Arg Met Glu Glu Phe Leu
  1               5                  10                  15

cgt ccg cag atg ttc cag gag gtg gct cag atg gtg cat ttc cag tgg   96
Arg Pro Gln Met Phe Gln Glu Val Ala Gln Met Val His Phe Gln Trp
             20                  25                  30

cgg aga aat ccg gtg gac aac agc atg gtg aac gca tcc atg gtc ccc   144
Arg Arg Asn Pro Val Asp Asn Ser Met Val Asn Ala Ser Met Val Pro
```

```
         35                  40                  45

ttc tgc ttg tcg gcg ttt ctt aat gtc ctg ttt ttc ggc tgc aat ggt   192
Phe Cys Leu Ser Ala Phe Leu Asn Val Leu Phe Phe Gly Cys Asn Gly
     50                  55                  60

tgg gac atc ata gga cat ttt tgg ctg gga cat cct gcc aac cag aat   240
Trp Asp Ile Ile Gly His Phe Trp Leu Gly His Pro Ala Asn Gln Asn
 65                  70                  75                  80

ccg ccc gtg ctt agc atc acc att tac ttc tcg atc agg gga ttg atg   288
Pro Pro Val Leu Ser Ile Thr Ile Tyr Phe Ser Ile Arg Gly Leu Met
                85                  90                  95

cta tac ctg aaa cga aag gaa atc gtt gag ttt gtt aac gac ttg gat   336
Leu Tyr Leu Lys Arg Lys Glu Ile Val Glu Phe Val Asn Asp Leu Asp
            100                 105                 110

cgg gag tgt ccg cgg gac ttg gtc agc cag ttg gac atg caa atg gat   384
Arg Glu Cys Pro Arg Asp Leu Val Ser Gln Leu Asp Met Gln Met Asp
        115                 120                 125

gag acg tac cga aac ttt tgg cag cgc tat cgc ttc atc cgt atc tac   432
Glu Thr Tyr Arg Asn Phe Trp Gln Arg Tyr Arg Phe Ile Arg Ile Tyr
    130                 135                 140

tcc cat ttg ggt ggt ccg atg ttc tgc gtt gtg cca tta gct cta ttc   480
Ser His Leu Gly Gly Pro Met Phe Cys Val Val Pro Leu Ala Leu Phe
145                 150                 155                 160

ctc ctg acc cac gag ggt aaa gat act cct gtt gcc cag cac gag cag   528
Leu Leu Thr His Glu Gly Lys Asp Thr Pro Val Ala Gln His Glu Gln
                165                 170                 175

ctc ctt gga gga tgg ctg cca tgc ggt gtg cga aag gac cca aat ttc   576
Leu Leu Gly Gly Trp Leu Pro Cys Gly Val Arg Lys Asp Pro Asn Phe
            180                 185                 190

tac ctt tta gtc tgg tcc ttc gac ctg atg tgc acc act tgc ggc gtc   624
Tyr Leu Leu Val Trp Ser Phe Asp Leu Met Cys Thr Thr Cys Gly Val
        195                 200                 205

tcc ttt ttc gtt acc ttc gac aac cta ttc aat gtg atg cag gga cat   672
Ser Phe Phe Val Thr Phe Asp Asn Leu Phe Asn Val Met Gln Gly His
    210                 215                 220

ttg gtc atg cat ttg ggc cat ctt gct cgc cag ttt tcg gcc atc gat   720
Leu Val Met His Leu Gly His Leu Ala Arg Gln Phe Ser Ala Ile Asp
```

```
225                 230                 235                 240

cct cga cag agt ttg acc gat gag aag cga ttc ttt gtg gat ctt agg   768
Pro Arg Gln Ser Leu Thr Asp Glu Lys Arg Phe Phe Val Asp Leu Arg
                245                 250                 255

tta tta gtt cag agg cag cag ctt ctt aat gga ttg tgc aga aaa tac   816
Leu Leu Val Gln Arg Gln Gln Leu Leu Asn Gly Leu Cys Arg Lys Tyr
            260                 265                 270

aac gac atc ttt aaa gtg gcc ttc ctg gtg agc aat ttt gta ggc gcc   864
Asn Asp Ile Phe Lys Val Ala Phe Leu Val Ser Asn Phe Val Gly Ala
        275                 280                 285

ggt tcc ctc tgc ttc tac ctc ttt atg ctc tcg gag aca tca gat gtc   912
Gly Ser Leu Cys Phe Tyr Leu Phe Met Leu Ser Glu Thr Ser Asp Val
    290                 295                 300

ctt atc atc gcc cag tat ata tta ccc act ttg gtc ctg gtg ggc ttc   960
Leu Ile Ile Ala Gln Tyr Ile Leu Pro Thr Leu Val Leu Val Gly Phe
305                 310                 315                 320

aca ttt gag att tgt cta cgg gga acc caa ctg gaa aag gcg tcg gag   1008
Thr Phe Glu Ile Cys Leu Arg Gly Thr Gln Leu Glu Lys Ala Ser Glu
                325                 330                 335

gga ctg gaa tcg tcg ttg cga agc cag gaa tgg tat ttg gga agt agg   1056
Gly Leu Glu Ser Ser Leu Arg Ser Gln Glu Trp Tyr Leu Gly Ser Arg
            340                 345                 350

cgg tac cgg aag ttc tat ttg ctc tgg acg caa tat tgc cag cga aca   1104
Arg Tyr Arg Lys Phe Tyr Leu Leu Trp Thr Gln Tyr Cys Gln Arg Thr
        355                 360                 365

cag caa ctg ggc gcc ttt ggg cta atc caa gtc aat atg gtg cac ttc   1152
Gln Gln Leu Gly Ala Phe Gly Leu Ile Gln Val Asn Met Val His Phe
    370                 375                 380

act gaa ata atg cag ctg gcc tat aga ctc ttc act ttt ctc aaa tct   1200
Thr Glu Ile Met Gln Leu Ala Tyr Arg Leu Phe Thr Phe Leu Lys Ser
385                 390                 395                 400

cat                                                             1203
His
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<210> 56
<211> 401

<212> PRT
<213> Drosophila melanogaster

<400> 56

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Met Lys Pro Thr Glu Ile Lys Lys Pro Tyr Arg Met Glu Glu Phe Leu
  1               5                  10                  15

Arg Pro Gln Met Phe Gln Glu Val Ala Gln Met Val His Phe Gln Trp
             20                  25                  30

Arg Arg Asn Pro Val Asp Asn Ser Met Val Asn Ala Ser Met Val Pro
         35                  40                  45

Phe Cys Leu Ser Ala Phe Leu Asn Val Leu Phe Phe Gly Cys Asn Gly
     50                  55                  60

Trp Asp Ile Ile Gly His Phe Trp Leu Gly His Pro Ala Asn Gln Asn
 65                  70                  75                  80

Pro Pro Val Leu Ser Ile Thr Ile Tyr Phe Ser Ile Arg Gly Leu Met
                 85                  90                  95

Leu Tyr Leu Lys Arg Lys Glu Ile Val Glu Phe Val Asn Asp Leu Asp
            100                 105                 110

Arg Glu Cys Pro Arg Asp Leu Val Ser Gln Leu Asp Met Gln Met Asp
        115                 120                 125

Glu Thr Tyr Arg Asn Phe Trp Gln Arg Tyr Arg Phe Ile Arg Ile Tyr
    130                 135                 140

Ser His Leu Gly Gly Pro Met Phe Cys Val Val Pro Leu Ala Leu Phe
145                 150                 155                 160

Leu Leu Thr His Glu Gly Lys Asp Thr Pro Val Ala Gln His Glu Gln
                165                 170                 175

Leu Leu Gly Gly Trp Leu Pro Cys Gly Val Arg Lys Asp Pro Asn Phe
            180                 185                 190

Tyr Leu Leu Val Trp Ser Phe Asp Leu Met Cys Thr Thr Cys Gly Val
        195                 200                 205

Ser Phe Phe Val Thr Phe Asp Asn Leu Phe Asn Val Met Gln Gly His
    210                 215                 220

Leu Val Met His Leu Gly His Leu Ala Arg Gln Phe Ser Ala Ile Asp
225                 230                 235                 240
```

```
Pro Arg Gln Ser Leu Thr Asp Glu Lys Arg Phe Phe Val Asp Leu Arg
                245                 250                 255

Leu Leu Val Gln Arg Gln Gln Leu Leu Asn Gly Leu Cys Arg Lys Tyr
            260                 265                 270

Asn Asp Ile Phe Lys Val Ala Phe Leu Val Ser Asn Phe Val Gly Ala
        275                 280                 285

Gly Ser Leu Cys Phe Tyr Leu Phe Met Leu Ser Glu Thr Ser Asp Val
    290                 295                 300

Leu Ile Ile Ala Gln Tyr Ile Leu Pro Thr Leu Val Leu Val Gly Phe
305                 310                 315                 320

Thr Phe Glu Ile Cys Leu Arg Gly Thr Gln Leu Glu Lys Ala Ser Glu
                325                 330                 335

Gly Leu Glu Ser Ser Leu Arg Ser Gln Glu Trp Tyr Leu Gly Ser Arg
            340                 345                 350

Arg Tyr Arg Lys Phe Tyr Leu Leu Trp Thr Gln Tyr Cys Gln Arg Thr
        355                 360                 365

Gln Gln Leu Gly Ala Phe Gly Leu Ile Gln Val Asn Met Val His Phe
    370                 375                 380

Thr Glu Ile Met Gln Leu Ala Tyr Arg Leu Phe Thr Phe Leu Lys Ser
385                 390                 395                 400

His
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<210> 57
<211> 1131
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1131)
<223> DOR 92E.1

<400> 57
atg act ttc tac aag acc atc ggc gag gat ctg tac tcc gat agg gat 48

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Met Thr Phe Tyr Lys Thr Ile Gly Glu Asp Leu Tyr Ser Asp Arg Asp
  1               5                  10                  15

ccg aat gtg ata agg cgt tac ctg cta cgt ttt tat ctg gta ctc ggt   96
Pro Asn Val Ile Arg Arg Tyr Leu Leu Arg Phe Tyr Leu Val Leu Gly
             20                  25                  30

ttt ctc aac ttc aat gcc tat gtg gtg ggc gaa atc gcg tac ttt ata   144
Phe Leu Asn Phe Asn Ala Tyr Val Val Gly Glu Ile Ala Tyr Phe Ile
         35                  40                  45

gtc cat ata atg tcg acg act act ctt ttg gag gcc act gca gtg gca   192
Val His Ile Met Ser Thr Thr Thr Leu Leu Glu Ala Thr Ala Val Ala
     50                  55                  60

ccg tgc att ggt ttc agc ttc atg gcc gac ttt aag cag ttc ggt ctc   240
Pro Cys Ile Gly Phe Ser Phe Met Ala Asp Phe Lys Gln Phe Gly Leu
 65                  70                  75                  80

aca gtg aat aga aag cga ttg gtc aga ttg ctg gat gat ctc aag gag   288
Thr Val Asn Arg Lys Arg Leu Val Arg Leu Leu Asp Asp Leu Lys Glu
                 85                  90                  95

ata ttt cct tta gat tta gaa gcg cag cgg aag tat aac gta tcg ttt   336
Ile Phe Pro Leu Asp Leu Glu Ala Gln Arg Lys Tyr Asn Val Ser Phe
            100                 105                 110

tac cgg aaa cac atg aac agg gtc atg acc cta ttc acc atc ctc tgc   384
Tyr Arg Lys His Met Asn Arg Val Met Thr Leu Phe Thr Ile Leu Cys
        115                 120                 125

atg acc tac acc tcg tca ttt agc ttt tat cca gcc atc aag tcg acc   432
Met Thr Tyr Thr Ser Ser Phe Ser Phe Tyr Pro Ala Ile Lys Ser Thr
    130                 135                 140

ata aag tat tac ctt atg gga tcg gaa atc ttt gag cgc aac tac gga   480
Ile Lys Tyr Tyr Leu Met Gly Ser Glu Ile Phe Glu Arg Asn Tyr Gly
145                 150                 155                 160

ttt cac att ttg ttt ccc tac gac gca gaa acg gat ctg acg gtc tac   528
Phe His Ile Leu Phe Pro Tyr Asp Ala Glu Thr Asp Leu Thr Val Tyr
                165                 170                 175

tgg ttt tcc tac tgg gga ttg gct cat tgt gcc tat gtg gcc gga gtt   576
Trp Phe Ser Tyr Trp Gly Leu Ala His Cys Ala Tyr Val Ala Gly Val
            180                 185                 190

tcc tac gtc tgc gtg gat ctc ctg ctg atc gcg acc ata acc cag ctg   624
```

```
Ser Tyr Val Cys Val Asp Leu Leu Leu Ile Ala Thr Ile Thr Gln Leu
        195                 200                 205

acc atg cac ttc aac ttt ata gcg aat gat ttg gag gcc tac gaa gga   672
Thr Met His Phe Asn Phe Ile Ala Asn Asp Leu Glu Ala Tyr Glu Gly
    210                 215                 220

ggt gat cat acg gat gaa gaa aat atc aaa tac ctg cac aac ttg gtc   720
Gly Asp His Thr Asp Glu Glu Asn Ile Lys Tyr Leu His Asn Leu Val
225                 230                 235                 240

gtc tat cat gcc agg gcg ctg gac ctc agc gag gag gtc aac aac ata   768
Val Tyr His Ala Arg Ala Leu Asp Leu Ser Glu Glu Val Asn Asn Ile
                245                 250                 255

ttc agc ttc ctg atc ctg tgg aac ttt att gcc gca tcg ctc gtg att   816
Phe Ser Phe Leu Ile Leu Trp Asn Phe Ile Ala Ala Ser Leu Val Ile
            260                 265                 270

tgc ttc gct ggc ttt cag att aca gcc tca aat gtg gag gac ata ggg   864
Cys Phe Ala Gly Phe Gln Ile Thr Ala Ser Asn Val Glu Asp Ile Gly
        275                 280                 285

gtg tac ttc ata ttt ttt tca gct tcg ctg gtt caa gtc ttt aaa tgt   912
Val Tyr Phe Ile Phe Phe Ser Ala Ser Leu Val Gln Val Phe Lys Cys
    290                 295                 300

tct ttt cag agc tct cgg att ggc cat tcg gca ttt aat cag aac tgg   960
Ser Phe Gln Ser Ser Arg Ile Gly His Ser Ala Phe Asn Gln Asn Trp
305                 310                 315                 320

ttg cca tgc agc acc aaa tac aaa cgc atc ctg cag ttt att atc gcg   1008
Leu Pro Cys Ser Thr Lys Tyr Lys Arg Ile Leu Gln Phe Ile Ile Ala
                325                 330                 335

cgc agc cag aag ccc gcc tct ata aga ccg cct acc ttt cca ccc ata   1056
Arg Ser Gln Lys Pro Ala Ser Ile Arg Pro Pro Thr Phe Pro Pro Ile
            340                 345                 350

tct ttt aat acc ttt atg aag gta atc agc atg tcg tat cag ttt ttt   1104
Ser Phe Asn Thr Phe Met Lys Val Ile Ser Met Ser Tyr Gln Phe Phe
        355                 360                 365

gca ctg ctc cgc acc aca tat tat ggt                              1131
Ala Leu Leu Arg Thr Thr Tyr Tyr Gly
    370                 375
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<210> 58
<211> 377
<212> PRT
<213> Drosophila melanogaster

<400> 58
Met Thr Phe Tyr Lys Thr Ile Gly Glu Asp Leu Tyr Ser Asp Arg Asp
1 5 10 15

Pro Asn Val Ile Arg Arg Tyr Leu Leu Arg Phe Tyr Leu Val Leu Gly
20 25 30

Phe Leu Asn Phe Asn Ala Tyr Val Val Gly Glu Ile Ala Tyr Phe Ile
35 40 45

Val His Ile Met Ser Thr Thr Thr Leu Leu Glu Ala Thr Ala Val Ala
50 55 60

Pro Cys Ile Gly Phe Ser Phe Met Ala Asp Phe Lys Gln Phe Gly Leu
65 70 75 80

Thr Val Asn Arg Lys Arg Leu Val Arg Leu Leu Asp Asp Leu Lys Glu
85 90 95

Ile Phe Pro Leu Asp Leu Glu Ala Gln Arg Lys Tyr Asn Val Ser Phe
100 105 110

Tyr Arg Lys His Met Asn Arg Val Met Thr Leu Phe Thr Ile Leu Cys
115 120 125

Met Thr Tyr Thr Ser Ser Phe Ser Phe Tyr Pro Ala Ile Lys Ser Thr
130 135 140

Ile Lys Tyr Tyr Leu Met Gly Ser Glu Ile Phe Glu Arg Asn Tyr Gly
145 150 155 160

Phe His Ile Leu Phe Pro Tyr Asp Ala Glu Thr Asp Leu Thr Val Tyr
165 170 175

Trp Phe Ser Tyr Trp Gly Leu Ala His Cys Ala Tyr Val Ala Gly Val
180 185 190

Ser Tyr Val Cys Val Asp Leu Leu Leu Ile Ala Thr Ile Thr Gln Leu
195 200 205

Thr Met His Phe Asn Phe Ile Ala Asn Asp Leu Glu Ala Tyr Glu Gly
210 215 220

```
Gly Asp His Thr Asp Glu Glu Asn Ile Lys Tyr Leu His Asn Leu Val
225                 230                 235                 240

Val Tyr His Ala Arg Ala Leu Asp Leu Ser Glu Glu Val Asn Asn Ile
                245                 250                 255

Phe Ser Phe Leu Ile Leu Trp Asn Phe Ile Ala Ala Ser Leu Val Ile
            260                 265                 270

Cys Phe Ala Gly Phe Gln Ile Thr Ala Ser Asn Val Glu Asp Ile Gly
        275                 280                 285

Val Tyr Phe Ile Phe Phe Ser Ala Ser Leu Val Gln Val Phe Lys Cys
    290                 295                 300

Ser Phe Gln Ser Ser Arg Ile Gly His Ser Ala Phe Asn Gln Asn Trp
305                 310                 315                 320

Leu Pro Cys Ser Thr Lys Tyr Lys Arg Ile Leu Gln Phe Ile Ile Ala
                325                 330                 335

Arg Ser Gln Lys Pro Ala Ser Ile Arg Pro Pro Thr Phe Pro Pro Ile
            340                 345                 350

Ser Phe Asn Thr Phe Met Lys Val Ile Ser Met Ser Tyr Gln Phe Phe
        355                 360                 365

Ala Leu Leu Arg Thr Thr Tyr Tyr Gly
    370                 375
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<210> 59
<211> 1161
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1161)
<223> DOR 94D.1

<400> 59

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atg gat aaa cac aag gat cgc att gaa tcc atg cgc cta att ctt cag   48
Met Asp Lys His Lys Asp Arg Ile Glu Ser Met Arg Leu Ile Leu Gln
  1               5                  10                  15

gtc atg caa cta ttt ggc ctc tgg ccg tgg tcc ttg aaa tcg gaa gag   96
```

```
Val Met Gln Leu Phe Gly Leu Trp Pro Trp Ser Leu Lys Ser Glu Glu
             20                  25                  30

gag tgg act ttc acc ggt ttt gta aag cgc aac tat cgc ttc ctg ctc   144
Glu Trp Thr Phe Thr Gly Phe Val Lys Arg Asn Tyr Arg Phe Leu Leu
         35                  40                  45

cat ctg ccc att acc ttc acc ttt att gga ctc atg tgg ctg gag gcc   192
His Leu Pro Ile Thr Phe Thr Phe Ile Gly Leu Met Trp Leu Glu Ala
     50                  55                  60

ttc atc tcg agc aat ctg gag cag gct ggc cag gtt ctg tac atg tcc   240
Phe Ile Ser Ser Asn Leu Glu Gln Ala Gly Gln Val Leu Tyr Met Ser
 65                  70                  75                  80

atc acc gag atg gct ttg gtg gtg aaa atc ctg agc att tgg cac tat   288
Ile Thr Glu Met Ala Leu Val Val Lys Ile Leu Ser Ile Trp His Tyr
                 85                  90                  95

cgc acc gaa gct tgg cgg ctg atg tac gaa ctc caa cat gct ccg gac   336
Arg Thr Glu Ala Trp Arg Leu Met Tyr Glu Leu Gln His Ala Pro Asp
            100                 105                 110

tac caa ctc cac aac cag gag gag gta gac ttt tgg cgc cgg gag caa   384
Tyr Gln Leu His Asn Gln Glu Glu Val Asp Phe Trp Arg Arg Glu Gln
        115                 120                 125

cga ttc ttc aag tgg ttc ttc tac atc tac att ctg att agc ttg ggc   432
Arg Phe Phe Lys Trp Phe Phe Tyr Ile Tyr Ile Leu Ile Ser Leu Gly
    130                 135                 140

gtg gta tat agt ggc tgc act gga gta ctt ttt ctg gag ggc tac gaa   480
Val Val Tyr Ser Gly Cys Thr Gly Val Leu Phe Leu Glu Gly Tyr Glu
145                 150                 155                 160

ctg ccc ttt gcc tac tac gtg ccc ttc gaa tgg cag aac gag aga agg   528
Leu Pro Phe Ala Tyr Tyr Val Pro Phe Glu Trp Gln Asn Glu Arg Arg
                165                 170                 175

tac tgg ttc gcc tat ggt tac gat atg gcg ggc atg acg ctg acc tgc   576
Tyr Trp Phe Ala Tyr Gly Tyr Asp Met Ala Gly Met Thr Leu Thr Cys
            180                 185                 190

atc tca aac att acc ctg gac acc ctg ggt tgc tat ttc ctg ttc cat   624
Ile Ser Asn Ile Thr Leu Asp Thr Leu Gly Cys Tyr Phe Leu Phe His
        195                 200                 205

atc tct ctt ttg tac cga ctg ctt ggt ctg cga ttg agg gaa acg aag   672
```

```
Ile Ser Leu Leu Tyr Arg Leu Leu Gly Leu Arg Leu Arg Glu Thr Lys
    210                 215                 220

aat atg aag aat gat acc att ttt ggc cag cag ttg cgt gcc atc ttc   720
Asn Met Lys Asn Asp Thr Ile Phe Gly Gln Gln Leu Arg Ala Ile Phe
225                 230                 235                 240

att atg cat cag agg att aga agc cta acc ctg acc tgc cag aga atc   768
Ile Met His Gln Arg Ile Arg Ser Leu Thr Leu Thr Cys Gln Arg Ile
                245                 250                 255

gta tct ccc tat atc cta tct cag atc att ttg agt gcc ctg atc atc   816
Val Ser Pro Tyr Ile Leu Ser Gln Ile Ile Leu Ser Ala Leu Ile Ile
            260                 265                 270

tgc ttt agt gga tac cgc ttg cag cat gtg gga att cgc gat aat ccc   864
Cys Phe Ser Gly Tyr Arg Leu Gln His Val Gly Ile Arg Asp Asn Pro
        275                 280                 285

ggc cag ttt ata tcc atg ttg cag ttt gtc agt gtg atg atc ctg cag   912
Gly Gln Phe Ile Ser Met Leu Gln Phe Val Ser Val Met Ile Leu Gln
    290                 295                 300

att tac ttg ccc tgc tac tat gga aac gag ata acc gtg tat gcc aat   960
Ile Tyr Leu Pro Cys Tyr Tyr Gly Asn Glu Ile Thr Val Tyr Ala Asn
305                 310                 315                 320

cag ctg acc aac gag gtt tac cat acc aat tgg ctg gaa tgt cgg cca   1008
Gln Leu Thr Asn Glu Val Tyr His Thr Asn Trp Leu Glu Cys Arg Pro
                325                 330                 335

ccg att cga aag tta ctc aat gcc tac atg gag cac ctg aag aaa ccg   1056
Pro Ile Arg Lys Leu Leu Asn Ala Tyr Met Glu His Leu Lys Lys Pro
            340                 345                 350

gtg acc atc cgg gct ggc aac tac ttc gcc gtg gga cta cca att ttt   1104
Val Thr Ile Arg Ala Gly Asn Tyr Phe Ala Val Gly Leu Pro Ile Phe
        355                 360                 365

gtt aag acc atc aac aac gcc tac agt ttc ttg gct tta tta cta aat   1152
Val Lys Thr Ile Asn Asn Ala Tyr Ser Phe Leu Ala Leu Leu Leu Asn
    370                 375                 380

gta tcg aat                                                      1161
Val Ser Asn
385
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<210> 60
<211> 387
<212> PRT
<213> Drosophila melanogaster

<400> 60
Met Asp Lys His Lys Asp Arg Ile Glu Ser Met Arg Leu Ile Leu Gln
1 5 10 15

Val Met Gln Leu Phe Gly Leu Trp Pro Trp Ser Leu Lys Ser Glu Glu
20 25 30

Glu Trp Thr Phe Thr Gly Phe Val Lys Arg Asn Tyr Arg Phe Leu Leu
35 40 45

His Leu Pro Ile Thr Phe Thr Phe Ile Gly Leu Met Trp Leu Glu Ala
50 55 60

Phe Ile Ser Ser Asn Leu Glu Gln Ala Gly Gln Val Leu Tyr Met Ser
65 70 75 80

Ile Thr Glu Met Ala Leu Val Val Lys Ile Leu Ser Ile Trp His Tyr
85 90 95

Arg Thr Glu Ala Trp Arg Leu Met Tyr Glu Leu Gln His Ala Pro Asp
100 105 110

Tyr Gln Leu His Asn Gln Glu Glu Val Asp Phe Trp Arg Arg Glu Gln
115 120 125

Arg Phe Phe Lys Trp Phe Phe Tyr Ile Tyr Ile Leu Ile Ser Leu Gly
130 135 140

Val Val Tyr Ser Gly Cys Thr Gly Val Leu Phe Leu Glu Gly Tyr Glu
145 150 155 160

Leu Pro Phe Ala Tyr Tyr Val Pro Phe Glu Trp Gln Asn Glu Arg Arg
165 170 175

Tyr Trp Phe Ala Tyr Gly Tyr Asp Met Ala Gly Met Thr Leu Thr Cys
180 185 190

Ile Ser Asn Ile Thr Leu Asp Thr Leu Gly Cys Tyr Phe Leu Phe His
195 200 205

Ile Ser Leu Leu Tyr Arg Leu Leu Gly Leu Arg Leu Arg Glu Thr Lys
210 215 220

```
Asn Met Lys Asn Asp Thr Ile Phe Gly Gln Gln Leu Arg Ala Ile Phe
225                 230                 235                 240

Ile Met His Gln Arg Ile Arg Ser Leu Thr Leu Thr Cys Gln Arg Ile
                245                 250                 255

Val Ser Pro Tyr Ile Leu Ser Gln Ile Ile Leu Ser Ala Leu Ile Ile
            260                 265                 270

Cys Phe Ser Gly Tyr Arg Leu Gln His Val Gly Ile Arg Asp Asn Pro
        275                 280                 285

Gly Gln Phe Ile Ser Met Leu Gln Phe Val Ser Val Met Ile Leu Gln
    290                 295                 300

Ile Tyr Leu Pro Cys Tyr Tyr Gly Asn Glu Ile Thr Val Tyr Ala Asn
305                 310                 315                 320

Gln Leu Thr Asn Glu Val Tyr His Thr Asn Trp Leu Glu Cys Arg Pro
                325                 330                 335

Pro Ile Arg Lys Leu Leu Asn Ala Tyr Met Glu His Leu Lys Lys Pro
            340                 345                 350

Val Thr Ile Arg Ala Gly Asn Tyr Phe Ala Val Gly Leu Pro Ile Phe
        355                 360                 365

Val Lys Thr Ile Asn Asn Ala Tyr Ser Phe Leu Ala Leu Leu Leu Asn
    370                 375                 380

Val Ser Asn
385
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<210> 61
<211> 1101
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1101)

<400> 61

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atg gag tct aca aat cgc cta agt gcc atc caa aca ctt tta gta atc   48
Met Glu Ser Thr Asn Arg Leu Ser Ala Ile Gln Thr Leu Leu Val Ile
  1               5                  10                  15
```

```
caa cgt tgg ata gga ctt ctt aaa tgg gaa aac gag ggc gag gat gga   96
Gln Arg Trp Ile Gly Leu Leu Lys Trp Glu Asn Glu Gly Glu Asp Gly
             20                  25                  30

gta tta acc tgg cta aaa cga ata tat cct ttt gta ctg cac ctt cca  144
Val Leu Thr Trp Leu Lys Arg Ile Tyr Pro Phe Val Leu His Leu Pro
         35                  40                  45

ctg acc ttc acg tat att gcc tta atg tgg tat gaa gct att aca tcg  192
Leu Thr Phe Thr Tyr Ile Ala Leu Met Trp Tyr Glu Ala Ile Thr Ser
     50                  55                  60

tca gat ttt gag gaa gct ggt caa gtt ctg tac atg tcc atc acc gaa  240
Ser Asp Phe Glu Glu Ala Gly Gln Val Leu Tyr Met Ser Ile Thr Glu
 65                  70                  75                  80

ctg gca ttg gtc act aaa ctg ctg aat att tgg tat cgt cgt cat gaa  288
Leu Ala Leu Val Thr Lys Leu Leu Asn Ile Trp Tyr Arg Arg His Glu
                 85                  90                  95

gct gct agt cta atc cac gaa ttg caa cac gat ccc gca ttt aat ctg  336
Ala Ala Ser Leu Ile His Glu Leu Gln His Asp Pro Ala Phe Asn Leu
            100                 105                 110

cgc aat tcg gag gaa atc aaa ttc tgg cag caa aat cag agg aac ttt  384
Arg Asn Ser Glu Glu Ile Lys Phe Trp Gln Gln Asn Gln Arg Asn Phe
        115                 120                 125

aag aga ata ttt tac tgg tac atc tgg ggc agc ctt ttc gtg gct gta  432
Lys Arg Ile Phe Tyr Trp Tyr Ile Trp Gly Ser Leu Phe Val Ala Val
    130                 135                 140

atg ggt tat ata agc gtg ttt ttc cag gag gat tac gag ctg ccc ttt  480
Met Gly Tyr Ile Ser Val Phe Phe Gln Glu Asp Tyr Glu Leu Pro Phe
145                 150                 155                 160

ggc tac tac gtg cca ttc gag tgg cgc acc agg gaa cga tac ttc tac  528
Gly Tyr Tyr Val Pro Phe Glu Trp Arg Thr Arg Glu Arg Tyr Phe Tyr
                165                 170                 175

gct tgg ggc tat aat gtg gtg gcc atg acc ctg tgc tgt cta tcc aac  576
Ala Trp Gly Tyr Asn Val Val Ala Met Thr Leu Cys Cys Leu Ser Asn
            180                 185                 190

atc cta ctg gac aca cta ggc tgt tat ttc atg ttc cac atc gcc tcg  624
Ile Leu Leu Asp Thr Leu Gly Cys Tyr Phe Met Phe His Ile Ala Ser
        195                 200                 205
```

```
ctt ttc agg ctt ttg gga atg cga ctg gag gcc ttg aaa aat gca gcc   672
Leu Phe Arg Leu Leu Gly Met Arg Leu Glu Ala Leu Lys Asn Ala Ala
    210                 215                 220

gaa gag aaa gcc aga ccg gag ttg cgc cgc att ttc caa ctg cac act   720
Glu Glu Lys Ala Arg Pro Glu Leu Arg Arg Ile Phe Gln Leu His Thr
225                 230                 235                 240

aaa gtc cgc cga ttg acg agg gaa tgc gaa gtg tta gtt tca ccc tat   768
Lys Val Arg Arg Leu Thr Arg Glu Cys Glu Val Leu Val Ser Pro Tyr
                245                 250                 255

gtt cta tcc caa gtg gtc ttc agt gcc ttc atc atc tgc ttc agt gcc   816
Val Leu Ser Gln Val Val Phe Ser Ala Phe Ile Ile Cys Phe Ser Ala
            260                 265                 270

tat cga ctg gtg cac atg ggc ttc aag cag cga cct gga ctc ttc gtg   864
Tyr Arg Leu Val His Met Gly Phe Lys Gln Arg Pro Gly Leu Phe Val
        275                 280                 285

acc acc gtg caa ttc gtg gcc gtc atg atc gtc cag att ttc ttg ccc   912
Thr Thr Val Gln Phe Val Ala Val Met Ile Val Gln Ile Phe Leu Pro
    290                 295                 300

tgt tac tac ggc aat gag ttg acc ttt cat gcc aat gca ctc act aat   960
Cys Tyr Tyr Gly Asn Glu Leu Thr Phe His Ala Asn Ala Leu Thr Asn
305                 310                 315                 320

agt gtc ttc ggt acc aat tgg ctg gag tac tcc gtg ggc act cgc aag   1008
Ser Val Phe Gly Thr Asn Trp Leu Glu Tyr Ser Val Gly Thr Arg Lys
                325                 330                 335

ctg ctt aac tgc tac atg gag ttc ctc aag cga ccg gtt aaa acc atc   1056
Leu Leu Asn Cys Tyr Met Glu Phe Leu Lys Arg Pro Val Lys Thr Ile
            340                 345                 350

aac aat gcc tac agt ttc ttc gcc ctg ctg cta aag ata tcc aag       1101
Asn Asn Ala Tyr Ser Phe Phe Ala Leu Leu Leu Lys Ile Ser Lys
        355                 360                 365
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<210> 62
<211> 367
<212> PRT
<213> Drosophila melanogaster

<400> 62

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Met Glu Ser Thr Asn Arg Leu Ser Ala Ile Gln Thr Leu Leu Val Ile
 1               5                  10                  15

Gln Arg Trp Ile Gly Leu Leu Lys Trp Glu Asn Glu Gly Glu Asp Gly
            20                  25                  30

Val Leu Thr Trp Leu Lys Arg Ile Tyr Pro Phe Val Leu His Leu Pro
        35                  40                  45

Leu Thr Phe Thr Tyr Ile Ala Leu Met Trp Tyr Glu Ala Ile Thr Ser
    50                  55                  60

Ser Asp Phe Glu Glu Ala Gly Gln Val Leu Tyr Met Ser Ile Thr Glu
65                  70                  75                  80

Leu Ala Leu Val Thr Lys Leu Leu Asn Ile Trp Tyr Arg Arg His Glu
                85                  90                  95

Ala Ala Ser Leu Ile His Glu Leu Gln His Asp Pro Ala Phe Asn Leu
            100                 105                 110

Arg Asn Ser Glu Glu Ile Lys Phe Trp Gln Gln Asn Gln Arg Asn Phe
        115                 120                 125

Lys Arg Ile Phe Tyr Trp Tyr Ile Trp Gly Ser Leu Phe Val Ala Val
    130                 135                 140

Met Gly Tyr Ile Ser Val Phe Phe Gln Glu Asp Tyr Glu Leu Pro Phe
145                 150                 155                 160

Gly Tyr Tyr Val Pro Phe Glu Trp Arg Thr Arg Glu Arg Tyr Phe Tyr
                165                 170                 175

Ala Trp Gly Tyr Asn Val Val Ala Met Thr Leu Cys Cys Leu Ser Asn
            180                 185                 190

Ile Leu Leu Asp Thr Leu Gly Cys Tyr Phe Met Phe His Ile Ala Ser
        195                 200                 205

Leu Phe Arg Leu Leu Gly Met Arg Leu Glu Ala Leu Lys Asn Ala Ala
    210                 215                 220

Glu Glu Lys Ala Arg Pro Glu Leu Arg Arg Ile Phe Gln Leu His Thr
225                 230                 235                 240

Lys Val Arg Arg Leu Thr Arg Glu Cys Glu Val Leu Val Ser Pro Tyr
                245                 250                 255
```

```
Val Leu Ser Gln Val Val Phe Ser Ala Phe Ile Ile Cys Phe Ser Ala
            260                 265                 270

Tyr Arg Leu Val His Met Gly Phe Lys Gln Arg Pro Gly Leu Phe Val
        275                 280                 285

Thr Thr Val Gln Phe Val Ala Val Met Ile Val Gln Ile Phe Leu Pro
    290                 295                 300

Cys Tyr Tyr Gly Asn Glu Leu Thr Phe His Ala Asn Ala Leu Thr Asn
305                 310                 315                 320

Ser Val Phe Gly Thr Asn Trp Leu Glu Tyr Ser Val Gly Thr Arg Lys
                325                 330                 335

Leu Leu Asn Cys Tyr Met Glu Phe Leu Lys Arg Pro Val Lys Thr Ile
            340                 345                 350

Asn Asn Ala Tyr Ser Phe Phe Ala Leu Leu Leu Lys Ile Ser Lys
        355                 360                 365
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<210> 63
<211> 1095
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1095)
<223> DORLU 1.1

<400> 63

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atg tgg ctc atc gga tgg att ccg ccg aag gag gga gtc ctg cgc tac   48
Met Trp Leu Ile Gly Trp Ile Pro Pro Lys Glu Gly Val Leu Arg Tyr
  1               5                  10                  15

gtg tat ctc ttc tgg acc tgc gtg ccc ttc gcc ttc ggg gtg ttt tac   96
Val Tyr Leu Phe Trp Thr Cys Val Pro Phe Ala Phe Gly Val Phe Tyr
             20                  25                  30

ctg ccc gtg ggc ttc atc atc agc tac gtg cag gag ttc aag aac ttc   144
Leu Pro Val Gly Phe Ile Ile Ser Tyr Val Gln Glu Phe Lys Asn Phe
         35                  40                  45

acg ccg ggc gag ttc ctt acc tcg ctg cag gtg tgc atc aat gtg tat   192
Thr Pro Gly Glu Phe Leu Thr Ser Leu Gln Val Cys Ile Asn Val Tyr
```

```
     50                  55                  60

ggc gcc tcg gtg aag tcc acc atc acc tac ctc ttc ctc tgg cga ctg   240
Gly Ala Ser Val Lys Ser Thr Ile Thr Tyr Leu Phe Leu Trp Arg Leu
 65                  70                  75                  80

cgc aag acg gag atc ctt ctg gac tcc ctg gac aag agg ctg gcg aac   288
Arg Lys Thr Glu Ile Leu Leu Asp Ser Leu Asp Lys Arg Leu Ala Asn
                85                  90                  95

gac agc gat cgc gag agg atc cac aat atg gtg gcg cgc tgc aac tac   336
Asp Ser Asp Arg Glu Arg Ile His Asn Met Val Ala Arg Cys Asn Tyr
            100                 105                 110

gcc ttt ctc atc tac agc ttc atc tac tgc gga tac gcg ggt tcc act   384
Ala Phe Leu Ile Tyr Ser Phe Ile Tyr Cys Gly Tyr Ala Gly Ser Thr
        115                 120                 125

ttc ctg tcc tac gcc ctc agt ggt cgt cct ccg tgg tcc gtc tac aat   432
Phe Leu Ser Tyr Ala Leu Ser Gly Arg Pro Pro Trp Ser Val Tyr Asn
    130                 135                 140

ccc ttc atc gat tgg cgc gat ggc atg ggc agc ctg tgg atc cag gcc   480
Pro Phe Ile Asp Trp Arg Asp Gly Met Gly Ser Leu Trp Ile Gln Ala
145                 150                 155                 160

ata ttc gag tac atc acc atg tcc ttc gcc gtg ctg cag gac cag cta   528
Ile Phe Glu Tyr Ile Thr Met Ser Phe Ala Val Leu Gln Asp Gln Leu
                165                 170                 175

tcc gac acg tat ccc ctg atg ttc acc att atg ttc cgg gcc cac atg   576
Ser Asp Thr Tyr Pro Leu Met Phe Thr Ile Met Phe Arg Ala His Met
            180                 185                 190

gag gtc ctc aag gat cac gtg cgg agc ctg cgc atg gat ccc gag cgc   624
Glu Val Leu Lys Asp His Val Arg Ser Leu Arg Met Asp Pro Glu Arg
        195                 200                 205

agt gag gca gac aac tat cag gat ctg gtg aac tgc gtg ctg gac cac   672
Ser Glu Ala Asp Asn Tyr Gln Asp Leu Val Asn Cys Val Leu Asp His
    210                 215                 220

aag act ata ctg aaa tgc tgt gac atg att cgc ccc atg ata tcc cgc   720
Lys Thr Ile Leu Lys Cys Cys Asp Met Ile Arg Pro Met Ile Ser Arg
225                 230                 235                 240

acc atc ttc gtg caa ttc gcg ctg att ggt tcc gtt ttg ggc ctg acc   768
Thr Ile Phe Val Gln Phe Ala Leu Ile Gly Ser Val Leu Gly Leu Thr
```

```
                245                 250                 255

ctg gtg aac gtg ttc ttc ttc tcg aac ttc tgg aag ggc gtg gcc tcg   816
Leu Val Asn Val Phe Phe Phe Ser Asn Phe Trp Lys Gly Val Ala Ser
            260                 265                 270

ctc ctg ttc gtc atc acc atc ctg ctg cag acc ttc ccg ttc tgc tac   864
Leu Leu Phe Val Ile Thr Ile Leu Leu Gln Thr Phe Pro Phe Cys Tyr
        275                 280                 285

acc tgc aac atg ctg atc gac gat gcc cag gat ctg tcc aac gag att   912
Thr Cys Asn Met Leu Ile Asp Asp Ala Gln Asp Leu Ser Asn Glu Ile
    290                 295                 300

ttc cag tcc aac tgg gtg gac gcg gag ccg cgc tac aag gcg acg ctg   960
Phe Gln Ser Asn Trp Val Asp Ala Glu Pro Arg Tyr Lys Ala Thr Leu
305                 310                 315                 320

gtg ctc ttc atg cac cat gtt cag cag ccc ata atc ttc att gcc gga   1008
Val Leu Phe Met His His Val Gln Gln Pro Ile Ile Phe Ile Ala Gly
                325                 330                 335

ggc atc ttt ccc atc tct atg aac agc aac ata acc gta agg att act   1056
Gly Ile Phe Pro Ile Ser Met Asn Ser Asn Ile Thr Val Arg Ile Thr
            340                 345                 350

tct ttc ctg cca act gcc tac ttc aca ttt gac cca ttt              1095
Ser Phe Leu Pro Thr Ala Tyr Phe Thr Phe Asp Pro Phe
        355                 360                 365
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<210> 64
<211> 365
<212> PRT
<213> Drosophila melanogaster

<400> 64

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Met Trp Leu Ile Gly Trp Ile Pro Pro Lys Glu Gly Val Leu Arg Tyr
  1               5                  10                  15

Val Tyr Leu Phe Trp Thr Cys Val Pro Phe Ala Phe Gly Val Phe Tyr
             20                  25                  30

Leu Pro Val Gly Phe Ile Ile Ser Tyr Val Gln Glu Phe Lys Asn Phe
         35                  40                  45

Thr Pro Gly Glu Phe Leu Thr Ser Leu Gln Val Cys Ile Asn Val Tyr
     50                  55                  60
```

```
Gly Ala Ser Val Lys Ser Thr Ile Thr Tyr Leu Phe Leu Trp Arg Leu
 65                  70                  75                  80

Arg Lys Thr Glu Ile Leu Leu Asp Ser Leu Asp Lys Arg Leu Ala Asn
                 85                  90                  95

Asp Ser Asp Arg Glu Arg Ile His Asn Met Val Ala Arg Cys Asn Tyr
            100                 105                 110

Ala Phe Leu Ile Tyr Ser Phe Ile Tyr Cys Gly Tyr Ala Gly Ser Thr
        115                 120                 125

Phe Leu Ser Tyr Ala Leu Ser Gly Arg Pro Pro Trp Ser Val Tyr Asn
    130                 135                 140

Pro Phe Ile Asp Trp Arg Asp Gly Met Gly Ser Leu Trp Ile Gln Ala
145                 150                 155                 160

Ile Phe Glu Tyr Ile Thr Met Ser Phe Ala Val Leu Gln Asp Gln Leu
                165                 170                 175

Ser Asp Thr Tyr Pro Leu Met Phe Thr Ile Met Phe Arg Ala His Met
            180                 185                 190

Glu Val Leu Lys Asp His Val Arg Ser Leu Arg Met Asp Pro Glu Arg
        195                 200                 205

Ser Glu Ala Asp Asn Tyr Gln Asp Leu Val Asn Cys Val Leu Asp His
    210                 215                 220

Lys Thr Ile Leu Lys Cys Cys Asp Met Ile Arg Pro Met Ile Ser Arg
225                 230                 235                 240

Thr Ile Phe Val Gln Phe Ala Leu Ile Gly Ser Val Leu Gly Leu Thr
                245                 250                 255

Leu Val Asn Val Phe Phe Phe Ser Asn Phe Trp Lys Gly Val Ala Ser
            260                 265                 270

Leu Leu Phe Val Ile Thr Ile Leu Leu Gln Thr Phe Pro Phe Cys Tyr
        275                 280                 285

Thr Cys Asn Met Leu Ile Asp Asp Ala Gln Asp Leu Ser Asn Glu Ile
    290                 295                 300

Phe Gln Ser Asn Trp Val Asp Ala Glu Pro Arg Tyr Lys Ala Thr Leu
305                 310                 315                 320
```

```
Val Leu Phe Met His His Val Gln Gln Pro Ile Ile Phe Ile Ala Gly
                325                 330                 335

Gly Ile Phe Pro Ile Ser Met Asn Ser Asn Ile Thr Val Arg Ile Thr
            340                 345                 350

Ser Phe Leu Pro Thr Ala Tyr Phe Thr Phe Asp Pro Phe
        355                 360                 365
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<210> 65
<211> 1233
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1233)
<223> DORLU 2.1

<400> 65

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atg acc aag ttc ttc ttc aag cgc ctg caa act gct cca ctt gat cag   48
Met Thr Lys Phe Phe Phe Lys Arg Leu Gln Thr Ala Pro Leu Asp Gln
  1               5                  10                  15

gag gtg agt tcc ctt gat gcc agc gac tac tac tac cgc atc gca ttt   96
Glu Val Ser Ser Leu Asp Ala Ser Asp Tyr Tyr Tyr Arg Ile Ala Phe
             20                  25                  30

ttc ctg ggc tgg acc ccg ccc aag ggg gct ctg ctc cga tgg atc tac   144
Phe Leu Gly Trp Thr Pro Pro Lys Gly Ala Leu Leu Arg Trp Ile Tyr
         35                  40                  45

tcc ctg tgg act ctg acc acg atg tgg ctg ggt atc gtg tac ctg ccg   192
Ser Leu Trp Thr Leu Thr Thr Met Trp Leu Gly Ile Val Tyr Leu Pro
     50                  55                  60

ctc gga ctg agc ctc acc tat gtg aag cac ttc gat aga ttc acg ccg   240
Leu Gly Leu Ser Leu Thr Tyr Val Lys His Phe Asp Arg Phe Thr Pro
 65                  70                  75                  80

acg gag ttc ctg acc tcc ctg cag gtg gat atc aac tgc atc ggg aac   288
Thr Glu Phe Leu Thr Ser Leu Gln Val Asp Ile Asn Cys Ile Gly Asn
                 85                  90                  95

gtg atc aag tca tgc gta act tat tcc cag atg tgg cgt ttt cgc cgg   336
```

```
Val Ile Lys Ser Cys Val Thr Tyr Ser Gln Met Trp Arg Phe Arg Arg
            100                 105                 110

atg aat gag ctt atc tcg tcc ctg gac aag aga tgt gtg act acg aca   384
Met Asn Glu Leu Ile Ser Ser Leu Asp Lys Arg Cys Val Thr Thr Thr
        115                 120                 125

cag cgt cga att ttc cat aag atg gtg gca cgg gtt aat ctc atc gtg   432
Gln Arg Arg Ile Phe His Lys Met Val Ala Arg Val Asn Leu Ile Val
    130                 135                 140

att ctg ttc ttg tcc acg tac ttg ggc ttc tgc ttt cta act ctg ttc   480
Ile Leu Phe Leu Ser Thr Tyr Leu Gly Phe Cys Phe Leu Thr Leu Phe
145             150                 155                 160

act tcg gtt ttc gct ggc aaa gct cct tgg cag ctg tac aac cca ctg   528
Thr Ser Val Phe Ala Gly Lys Ala Pro Trp Gln Leu Tyr Asn Pro Leu
                165                 170                 175

gtg gac tgg cgg aaa ggc cat tgg cag cta tgg att gcc tcc atc ctg   576
Val Asp Trp Arg Lys Gly His Trp Gln Leu Trp Ile Ala Ser Ile Leu
            180                 185                 190

gag tac tgt gtg gtc tcc att ggc acc atg cag gag ttg atg tcc gac   624
Glu Tyr Cys Val Val Ser Ile Gly Thr Met Gln Glu Leu Met Ser Asp
        195                 200                 205

acc tac gcc ata gtg ttc atc tcc ttg ttc cgc tgc cac ctg gct att   672
Thr Tyr Ala Ile Val Phe Ile Ser Leu Phe Arg Cys His Leu Ala Ile
    210                 215                 220

ctc aga gat cgc ata gct aat ctg cgg cag gat ccg aaa ctc agt gag   720
Leu Arg Asp Arg Ile Ala Asn Leu Arg Gln Asp Pro Lys Leu Ser Glu
225                 230                 235                 240

atg gaa cac tat gag cag atg gtg gcc tgc att cag gat cat cga acc   768
Met Glu His Tyr Glu Gln Met Val Ala Cys Ile Gln Asp His Arg Thr
                245                 250                 255

atc ata cag tgc tcc cag att att cga ccc atc ctg tcg atc act atc   816
Ile Ile Gln Cys Ser Gln Ile Ile Arg Pro Ile Leu Ser Ile Thr Ile
            260                 265                 270

ttt gcc cag ttc atg ctg gtt ggc att gac ttg ggt ctg gcg gcc atc   864
Phe Ala Gln Phe Met Leu Val Gly Ile Asp Leu Gly Leu Ala Ala Ile
        275                 280                 285

agc atc ctc ttc ttt ccg aac acc att tgg acg atc atg gca aac gtg   912
```

```
Ser Ile Leu Phe Phe Pro Asn Thr Ile Trp Thr Ile Met Ala Asn Val
    290                 295                 300

tcg ttc atc gtg gcc atc tgt aca gag tcc ttt cca tgc tgc atg ctc   960
Ser Phe Ile Val Ala Ile Cys Thr Glu Ser Phe Pro Cys Cys Met Leu
305                 310                 315                 320

tgc gag cat ctg atc gag gac tcc gtc cat gtg agc aac gcc ctg ttc   1008
Cys Glu His Leu Ile Glu Asp Ser Val His Val Ser Asn Ala Leu Phe
                325                 330                 335

cac tca aac tgg ata acc gcg gac agg agc tac aag tcg gcg gtt ctg   1056
His Ser Asn Trp Ile Thr Ala Asp Arg Ser Tyr Lys Ser Ala Val Leu
            340                 345                 350

tat ttc ctg cac cgg gct cag caa ccc att caa ttc acg gcc ggc tcc   1104
Tyr Phe Leu His Arg Ala Gln Gln Pro Ile Gln Phe Thr Ala Gly Ser
        355                 360                 365

ata ttt ccc att tcg gtg cag agc aac ata gcc gtg gcc aag ttc gcg   1152
Ile Phe Pro Ile Ser Val Gln Ser Asn Ile Ala Val Ala Lys Phe Ala
    370                 375                 380

ttc aca atc atc aca atc gtg aac caa atg aat ctg ggc gag aag ttc   1200
Phe Thr Ile Ile Thr Ile Val Asn Gln Met Asn Leu Gly Glu Lys Phe
385                 390                 395                 400

ttc agt gac agg agc aat ggc gat ata aat cct                      1233
Phe Ser Asp Arg Ser Asn Gly Asp Ile Asn Pro
                405                 410


<210> 66
<211> 411
<212> PRT
<213> Drosophila melanogaster

<400> 66
Met Thr Lys Phe Phe Phe Lys Arg Leu Gln Thr Ala Pro Leu Asp Gln
  1               5                  10                  15

Glu Val Ser Ser Leu Asp Ala Ser Asp Tyr Tyr Tyr Arg Ile Ala Phe
             20                  25                  30

Phe Leu Gly Trp Thr Pro Pro Lys Gly Ala Leu Leu Arg Trp Ile Tyr
         35                  40                  45

Ser Leu Trp Thr Leu Thr Thr Met Trp Leu Gly Ile Val Tyr Leu Pro
```

```
     50                  55                  60

Leu Gly Leu Ser Leu Thr Tyr Val Lys His Phe Asp Arg Phe Thr Pro
 65                  70                  75                  80

Thr Glu Phe Leu Thr Ser Leu Gln Val Asp Ile Asn Cys Ile Gly Asn
                 85                  90                  95

Val Ile Lys Ser Cys Val Thr Tyr Ser Gln Met Trp Arg Phe Arg Arg
            100                 105                 110

Met Asn Glu Leu Ile Ser Ser Leu Asp Lys Arg Cys Val Thr Thr Thr
        115                 120                 125

Gln Arg Arg Ile Phe His Lys Met Val Ala Arg Val Asn Leu Ile Val
    130                 135                 140

Ile Leu Phe Leu Ser Thr Tyr Leu Gly Phe Cys Phe Leu Thr Leu Phe
145                 150                 155                 160

Thr Ser Val Phe Ala Gly Lys Ala Pro Trp Gln Leu Tyr Asn Pro Leu
                165                 170                 175

Val Asp Trp Arg Lys Gly His Trp Gln Leu Trp Ile Ala Ser Ile Leu
            180                 185                 190

Glu Tyr Cys Val Val Ser Ile Gly Thr Met Gln Glu Leu Met Ser Asp
        195                 200                 205

Thr Tyr Ala Ile Val Phe Ile Ser Leu Phe Arg Cys His Leu Ala Ile
    210                 215                 220

Leu Arg Asp Arg Ile Ala Asn Leu Arg Gln Asp Pro Lys Leu Ser Glu
225                 230                 235                 240

Met Glu His Tyr Glu Gln Met Val Ala Cys Ile Gln Asp His Arg Thr
                245                 250                 255

Ile Ile Gln Cys Ser Gln Ile Ile Arg Pro Ile Leu Ser Ile Thr Ile
            260                 265                 270

Phe Ala Gln Phe Met Leu Val Gly Ile Asp Leu Gly Leu Ala Ala Ile
        275                 280                 285

Ser Ile Leu Phe Phe Pro Asn Thr Ile Trp Thr Ile Met Ala Asn Val
    290                 295                 300

Ser Phe Ile Val Ala Ile Cys Thr Glu Ser Phe Pro Cys Cys Met Leu
```

```
305                 310                 315                 320

Cys Glu His Leu Ile Glu Asp Ser Val His Val Ser Asn Ala Leu Phe
                325                 330                 335

His Ser Asn Trp Ile Thr Ala Asp Arg Ser Tyr Lys Ser Ala Val Leu
            340                 345                 350

Tyr Phe Leu His Arg Ala Gln Gln Pro Ile Gln Phe Thr Ala Gly Ser
        355                 360                 365

Ile Phe Pro Ile Ser Val Gln Ser Asn Ile Ala Val Ala Lys Phe Ala
    370                 375                 380

Phe Thr Ile Ile Thr Ile Val Asn Gln Met Asn Leu Gly Glu Lys Phe
385                 390                 395                 400

Phe Ser Asp Arg Ser Asn Gly Asp Ile Asn Pro
                405                 410
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<210> 67
<211> 1191
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1191)
<223> DORLU 4.1

<400> 67

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atg att ttt aag tac att caa gag cca gtc ctt gga tcc tta ttt cga   48
Met Ile Phe Lys Tyr Ile Gln Glu Pro Val Leu Gly Ser Leu Phe Arg
  1               5                  10                  15

tcc cgg gat tcg ctg atc tac tta aac aga tcc ata gat caa atg gga   96
Ser Arg Asp Ser Leu Ile Tyr Leu Asn Arg Ser Ile Asp Gln Met Gly
            20                  25                  30

tgg aga ctg ccg cca cga act aag ccg tac tgg tgg ctc tat tac att   144
Trp Arg Leu Pro Pro Arg Thr Lys Pro Tyr Trp Trp Leu Tyr Tyr Ile
         35                  40                  45

tgg aca ttg gtg gtc ata gta ctc gtc ttt atc ttt ata ccc tat gga   192
Trp Thr Leu Val Val Ile Val Leu Val Phe Ile Phe Ile Pro Tyr Gly
     50                  55                  60
```

```
ctg ata atg act gga ata aag gag ttc aag aac ttc acg acc acg gat   240
Leu Ile Met Thr Gly Ile Lys Glu Phe Lys Asn Phe Thr Thr Thr Asp
 65                  70                  75                  80

ctg ttt acg tat gtc cag gtg ccg gtt aac acc aat gct tcg atc atg   288
Leu Phe Thr Tyr Val Gln Val Pro Val Asn Thr Asn Ala Ser Ile Met
                85                  90                  95

aag ggc att ata gtg ttg ttt atg cgg cgg cga ttt tca agg gct cag   336
Lys Gly Ile Ile Val Leu Phe Met Arg Arg Arg Phe Ser Arg Ala Gln
            100                 105                 110

aag atg atg gac gcc atg gac att cga tgc acc aag atg gag gag aaa   384
Lys Met Met Asp Ala Met Asp Ile Arg Cys Thr Lys Met Glu Glu Lys
        115                 120                 125

gtc cag gtg cac cga gca gca gcc tta tgc aat cgt gtt gtt gtg att   432
Val Gln Val His Arg Ala Ala Ala Leu Cys Asn Arg Val Val Val Ile
    130                 135                 140

tac cat tgc ata tac ttc ggc tat cta tcc atg gcc tta acc gga gct   480
Tyr His Cys Ile Tyr Phe Gly Tyr Leu Ser Met Ala Leu Thr Gly Ala
145                 150                 155                 160

ctg gtg att ggg aag act cca ttc tgt ttg tac aat cca ctg gtt aac   528
Leu Val Ile Gly Lys Thr Pro Phe Cys Leu Tyr Asn Pro Leu Val Asn
                165                 170                 175

ccc gac gat cat ttc tat ctg gcc act gcc att gaa tcg gtc acc atg   576
Pro Asp Asp His Phe Tyr Leu Ala Thr Ala Ile Glu Ser Val Thr Met
            180                 185                 190

gct ggc att att ctg gcc aat ctc att ttg gac gta tat ccc atc ata   624
Ala Gly Ile Ile Leu Ala Asn Leu Ile Leu Asp Val Tyr Pro Ile Ile
        195                 200                 205

tat gtg gtc gtt ctg cgg atc cac atg gag ctc ttg agt gag cga atc   672
Tyr Val Val Val Leu Arg Ile His Met Glu Leu Leu Ser Glu Arg Ile
    210                 215                 220

aag acg ctg cgt act gat gtg gaa aaa ggc gac gat caa cat tat gcc   720
Lys Thr Leu Arg Thr Asp Val Glu Lys Gly Asp Asp Gln His Tyr Ala
225                 230                 235                 240

gag ctg gtg gag tgt gta aag gat cac aag cta att gtc gaa tat gga   768
Glu Leu Val Glu Cys Val Lys Asp His Lys Leu Ile Val Glu Tyr Gly
                245                 250                 255
```

```
aac act ctg cgt ccc atg ata tcc gcc acg atg ttc atc caa cta cta   816
Asn Thr Leu Arg Pro Met Ile Ser Ala Thr Met Phe Ile Gln Leu Leu
            260                 265                 270

tcc gtt ggc tta ctt ttg ggt ctg gca gcg gtg tcc atg cag ttc tat   864
Ser Val Gly Leu Leu Leu Gly Leu Ala Ala Val Ser Met Gln Phe Tyr
        275                 280                 285

aac acc gta atg gag cgt gtt gtc tcc ggg gtc tac acc ata gcc att   912
Asn Thr Val Met Glu Arg Val Val Ser Gly Val Tyr Thr Ile Ala Ile
    290                 295                 300

cta tcc cag acc ttt cca ttt tgc tat gtc tgt gag cag ctg agc agc   960
Leu Ser Gln Thr Phe Pro Phe Cys Tyr Val Cys Glu Gln Leu Ser Ser
305                 310                 315                 320

gat tgc gaa tcc ctg acc aac aca ctg ttc cat tcc aag tgg att gga   1008
Asp Cys Glu Ser Leu Thr Asn Thr Leu Phe His Ser Lys Trp Ile Gly
                325                 330                 335

gct gag cga cga tac aga acc acg atg ttg tac ttc att cac aat gtt   1056
Ala Glu Arg Arg Tyr Arg Thr Thr Met Leu Tyr Phe Ile His Asn Val
            340                 345                 350

cag cag tcg att ttg ttc act gcg ggc gga att ttc ccc ata tgt cta   1104
Gln Gln Ser Ile Leu Phe Thr Ala Gly Gly Ile Phe Pro Ile Cys Leu
        355                 360                 365

aac acc aat ata aag atg gcc aag ttc gct ttc tca gtg gtg acc att   1152
Asn Thr Asn Ile Lys Met Ala Lys Phe Ala Phe Ser Val Val Thr Ile
    370                 375                 380

gta aat gag atg gac ttg gcc gag aaa ttg aga agg gag               1191
Val Asn Glu Met Asp Leu Ala Glu Lys Leu Arg Arg Glu
385                 390                 395
```

<210> 68
<211> 397
<212> PRT
<213> Drosophila melanogaster

<400> 68

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Met Ile Phe Lys Tyr Ile Gln Glu Pro Val Leu Gly Ser Leu Phe Arg
  1               5                  10                  15

Ser Arg Asp Ser Leu Ile Tyr Leu Asn Arg Ser Ile Asp Gln Met Gly
```

```
            20                  25                  30

Trp Arg Leu Pro Pro Arg Thr Lys Pro Tyr Trp Trp Leu Tyr Tyr Ile
         35                  40                  45

Trp Thr Leu Val Val Ile Val Leu Val Phe Ile Phe Ile Pro Tyr Gly
     50                  55                  60

Leu Ile Met Thr Gly Ile Lys Glu Phe Lys Asn Phe Thr Thr Thr Asp
 65                  70                  75                  80

Leu Phe Thr Tyr Val Gln Val Pro Val Asn Thr Asn Ala Ser Ile Met
                 85                  90                  95

Lys Gly Ile Ile Val Leu Phe Met Arg Arg Arg Phe Ser Arg Ala Gln
            100                 105                 110

Lys Met Met Asp Ala Met Asp Ile Arg Cys Thr Lys Met Glu Glu Lys
        115                 120                 125

Val Gln Val His Arg Ala Ala Ala Leu Cys Asn Arg Val Val Val Ile
    130                 135                 140

Tyr His Cys Ile Tyr Phe Gly Tyr Leu Ser Met Ala Leu Thr Gly Ala
145                 150                 155                 160

Leu Val Ile Gly Lys Thr Pro Phe Cys Leu Tyr Asn Pro Leu Val Asn
                165                 170                 175

Pro Asp Asp His Phe Tyr Leu Ala Thr Ala Ile Glu Ser Val Thr Met
            180                 185                 190

Ala Gly Ile Ile Leu Ala Asn Leu Ile Leu Asp Val Tyr Pro Ile Ile
        195                 200                 205

Tyr Val Val Val Leu Arg Ile His Met Glu Leu Leu Ser Glu Arg Ile
    210                 215                 220

Lys Thr Leu Arg Thr Asp Val Glu Lys Gly Asp Asp Gln His Tyr Ala
225                 230                 235                 240

Glu Leu Val Glu Cys Val Lys Asp His Lys Leu Ile Val Glu Tyr Gly
                245                 250                 255

Asn Thr Leu Arg Pro Met Ile Ser Ala Thr Met Phe Ile Gln Leu Leu
            260                 265                 270

Ser Val Gly Leu Leu Leu Gly Leu Ala Ala Val Ser Met Gln Phe Tyr
```

```
        275                 280                 285

Asn Thr Val Met Glu Arg Val Val Ser Gly Val Tyr Thr Ile Ala Ile
    290                 295                 300

Leu Ser Gln Thr Phe Pro Phe Cys Tyr Val Cys Glu Gln Leu Ser Ser
305                 310                 315                 320

Asp Cys Glu Ser Leu Thr Asn Thr Leu Phe His Ser Lys Trp Ile Gly
                325                 330                 335

Ala Glu Arg Arg Tyr Arg Thr Thr Met Leu Tyr Phe Ile His Asn Val
            340                 345                 350

Gln Gln Ser Ile Leu Phe Thr Ala Gly Gly Ile Phe Pro Ile Cys Leu
        355                 360                 365

Asn Thr Asn Ile Lys Met Ala Lys Phe Ala Phe Ser Val Val Thr Ile
    370                 375                 380

Val Asn Glu Met Asp Leu Ala Glu Lys Leu Arg Arg Glu
385                 390                 395
```

<210> 69
<211> 1191
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1191)
<223> DORLU 5.1

<400> 69

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atg ttg ttc aac tat ctg cga aag ccg aat ccg aca aac ctt ttg act   48
Met Leu Phe Asn Tyr Leu Arg Lys Pro Asn Pro Thr Asn Leu Leu Thr
  1               5                  10                  15

tct ccg gac tca ttt aga tac ttt gag tat gga atg ttt tgc atg gga   96
Ser Pro Asp Ser Phe Arg Tyr Phe Glu Tyr Gly Met Phe Cys Met Gly
             20                  25                  30

tgg cac aca cca gca acg cat aag ata atc tac tat ata aca tcc tgt   144
Trp His Thr Pro Ala Thr His Lys Ile Ile Tyr Tyr Ile Thr Ser Cys
         35                  40                  45
```

```
ttg att ttt gct tgg tgt gcc gta tac ttg cca atc gga atc atc att   192
Leu Ile Phe Ala Trp Cys Ala Val Tyr Leu Pro Ile Gly Ile Ile Ile
     50                  55                  60

agt ttc aaa acg gat att aac aca ttc aca ccg aat gaa ctg ttg aca   240
Ser Phe Lys Thr Asp Ile Asn Thr Phe Thr Pro Asn Glu Leu Leu Thr
 65                  70                  75                  80

gtt atg caa tta ttt ttc aat tca gtg gga atg cca ttc aag gtt ctg   288
Val Met Gln Leu Phe Phe Asn Ser Val Gly Met Pro Phe Lys Val Leu
                 85                  90                  95

ttc ttc aat ttg tat att tct gga ttt tac aag gcc aaa aag ctc ctt   336
Phe Phe Asn Leu Tyr Ile Ser Gly Phe Tyr Lys Ala Lys Lys Leu Leu
            100                 105                 110

agc gaa atg gac aaa cgt tgc acc act ttg aag gag cga gtg gaa gtg   384
Ser Glu Met Asp Lys Arg Cys Thr Thr Leu Lys Glu Arg Val Glu Val
        115                 120                 125

cac caa ggt gtg gtc cgt tgc aac aag gcc tac ctc att tac cag ttc   432
His Gln Gly Val Val Arg Cys Asn Lys Ala Tyr Leu Ile Tyr Gln Phe
    130                 135                 140

att tat acc gcg tac act att tca aca ttt cta tcg gcg gct ctt agt   480
Ile Tyr Thr Ala Tyr Thr Ile Ser Thr Phe Leu Ser Ala Ala Leu Ser
145                 150                 155                 160

gga aaa ttg cca tgg cgc atc tat aat cct ttt gtg gat ttt cga gaa   528
Gly Lys Leu Pro Trp Arg Ile Tyr Asn Pro Phe Val Asp Phe Arg Glu
                165                 170                 175

agt aga tcc agt ttt tgg aaa gct gcc ctc aac gag aca gca ctt atg   576
Ser Arg Ser Ser Phe Trp Lys Ala Ala Leu Asn Glu Thr Ala Leu Met
            180                 185                 190

cta ttt gct gtg act caa acc cta atg agt gat ata tat cca ctg ctt   624
Leu Phe Ala Val Thr Gln Thr Leu Met Ser Asp Ile Tyr Pro Leu Leu
        195                 200                 205

tat ggt ttg atc ctg aga gtt cac ctc aaa ctt ttg cga cta aga gtg   672
Tyr Gly Leu Ile Leu Arg Val His Leu Lys Leu Leu Arg Leu Arg Val
    210                 215                 220

gag agc ctg tgc aca gat tct gga aaa agc gat gct gaa aac gag caa   720
Glu Ser Leu Cys Thr Asp Ser Gly Lys Ser Asp Ala Glu Asn Glu Gln
225                 230                 235                 240
```

```
gat ttg att aag tgc atc aag gat cac aat ctc att att gac tat gct   768
Asp Leu Ile Lys Cys Ile Lys Asp His Asn Leu Ile Ile Asp Tyr Ala
                245                 250                 255

gca gca ata cga cca gcg gtt acc cgc aca att ttc gtt caa ttc ctc   816
Ala Ala Ile Arg Pro Ala Val Thr Arg Thr Ile Phe Val Gln Phe Leu
            260                 265                 270

ttg atc gga att tgc ctt ggc ctt tca atg atc aat cta ctc ttc ttt   864
Leu Ile Gly Ile Cys Leu Gly Leu Ser Met Ile Asn Leu Leu Phe Phe
        275                 280                 285

gcc gac atc tgg aca gga ttg gcc aca gtg gct tac atc aat ggt cta   912
Ala Asp Ile Trp Thr Gly Leu Ala Thr Val Ala Tyr Ile Asn Gly Leu
    290                 295                 300

atg gtg cag aca ttt cca ttt tgc ttc gtt tgt gat cta ctc aaa aag   960
Met Val Gln Thr Phe Pro Phe Cys Phe Val Cys Asp Leu Leu Lys Lys
305                 310                 315                 320

gat tgt gaa ctt ctt gtg tcg gcc ata ttt cat tcc aac tgg att aat   1008
Asp Cys Glu Leu Leu Val Ser Ala Ile Phe His Ser Asn Trp Ile Asn
                325                 330                 335

tca agc cgc agt tac aag tca tct ttg aga tat ttt ctg aag aac gcc   1056
Ser Ser Arg Ser Tyr Lys Ser Ser Leu Arg Tyr Phe Leu Lys Asn Ala
            340                 345                 350

cag aaa tca att gct ttt aca gcc ggc tct att ttt ccc att tct act   1104
Gln Lys Ser Ile Ala Phe Thr Ala Gly Ser Ile Phe Pro Ile Ser Thr
        355                 360                 365

ggc tcg aat att aag gtg gct aag ctg gca ttt tcg gtg gtt act ttt   1152
Gly Ser Asn Ile Lys Val Ala Lys Leu Ala Phe Ser Val Val Thr Phe
    370                 375                 380

gtc aat caa ctt aac ata gct gac aga ttg aca aag aac               1191
Val Asn Gln Leu Asn Ile Ala Asp Arg Leu Thr Lys Asn
385                 390                 395
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<210> 70
<211> 397
<212> PRT
<213> Drosophila melanogaster

<400> 70
Met Leu Phe Asn Tyr Leu Arg Lys Pro Asn Pro Thr Asn Leu Leu Thr

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  1               5                  10                  15

Ser Pro Asp Ser Phe Arg Tyr Phe Glu Tyr Gly Met Phe Cys Met Gly
             20                  25                  30

Trp His Thr Pro Ala Thr His Lys Ile Ile Tyr Tyr Ile Thr Ser Cys
         35                  40                  45

Leu Ile Phe Ala Trp Cys Ala Val Tyr Leu Pro Ile Gly Ile Ile Ile
     50                  55                  60

Ser Phe Lys Thr Asp Ile Asn Thr Phe Thr Pro Asn Glu Leu Leu Thr
 65                  70                  75                  80

Val Met Gln Leu Phe Phe Asn Ser Val Gly Met Pro Phe Lys Val Leu
                 85                  90                  95

Phe Phe Asn Leu Tyr Ile Ser Gly Phe Tyr Lys Ala Lys Lys Leu Leu
            100                 105                 110

Ser Glu Met Asp Lys Arg Cys Thr Thr Leu Lys Glu Arg Val Glu Val
        115                 120                 125

His Gln Gly Val Val Arg Cys Asn Lys Ala Tyr Leu Ile Tyr Gln Phe
    130                 135                 140

Ile Tyr Thr Ala Tyr Thr Ile Ser Thr Phe Leu Ser Ala Ala Leu Ser
145                 150                 155                 160

Gly Lys Leu Pro Trp Arg Ile Tyr Asn Pro Phe Val Asp Phe Arg Glu
                165                 170                 175

Ser Arg Ser Ser Phe Trp Lys Ala Ala Leu Asn Glu Thr Ala Leu Met
            180                 185                 190

Leu Phe Ala Val Thr Gln Thr Leu Met Ser Asp Ile Tyr Pro Leu Leu
        195                 200                 205

Tyr Gly Leu Ile Leu Arg Val His Leu Lys Leu Leu Arg Leu Arg Val
    210                 215                 220

Glu Ser Leu Cys Thr Asp Ser Gly Lys Ser Asp Ala Glu Asn Glu Gln
225                 230                 235                 240

Asp Leu Ile Lys Cys Ile Lys Asp His Asn Leu Ile Ile Asp Tyr Ala
                245                 250                 255

Ala Ala Ile Arg Pro Ala Val Thr Arg Thr Ile Phe Val Gln Phe Leu
```

```
            260                 265                 270

Leu Ile Gly Ile Cys Leu Gly Leu Ser Met Ile Asn Leu Leu Phe Phe
        275                 280                 285

Ala Asp Ile Trp Thr Gly Leu Ala Thr Val Ala Tyr Ile Asn Gly Leu
    290                 295                 300

Met Val Gln Thr Phe Pro Phe Cys Phe Val Cys Asp Leu Leu Lys Lys
305                 310                 315                 320

Asp Cys Glu Leu Leu Val Ser Ala Ile Phe His Ser Asn Trp Ile Asn
                325                 330                 335

Ser Ser Arg Ser Tyr Lys Ser Ser Leu Arg Tyr Phe Leu Lys Asn Ala
            340                 345                 350

Gln Lys Ser Ile Ala Phe Thr Ala Gly Ser Ile Phe Pro Ile Ser Thr
        355                 360                 365

Gly Ser Asn Ile Lys Val Ala Lys Leu Ala Phe Ser Val Val Thr Phe
    370                 375                 380

Val Asn Gln Leu Asn Ile Ala Asp Arg Leu Thr Lys Asn
385                 390                 395



<210> 71
<211> 1239
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1239)
<223> DORLU 6.1

<400> 71
atg gcg gtg agc act cgt gtg gcc aca aag cag gaa gtg ccc gaa tcc   48
Met Ala Val Ser Thr Arg Val Ala Thr Lys Gln Glu Val Pro Glu Ser
  1               5                  10                  15

cgg cga gcg ttt agg aat ctc ttc aat tgc ttc tat gcc ctt ggc atg   96
Arg Arg Ala Phe Arg Asn Leu Phe Asn Cys Phe Tyr Ala Leu Gly Met
             20                  25                  30

cag gca ccg gat ggc agt cga ccg acc acg agc agc aca tgg caa cgc   144
```

```
Gln Ala Pro Asp Gly Ser Arg Pro Thr Thr Ser Ser Thr Trp Gln Arg
         35                  40                  45

atc tac gcc tgc ttc tcg gtg gtc atg tac gtg tgg caa ctg ctg ctg   192
Ile Tyr Ala Cys Phe Ser Val Val Met Tyr Val Trp Gln Leu Leu Leu
     50                  55                  60

gtg ccc aca ttc ttt gtg atc agc tat cgg tac atg ggc ggc atg gag   240
Val Pro Thr Phe Phe Val Ile Ser Tyr Arg Tyr Met Gly Gly Met Glu
 65                  70                  75                  80

att acc cag gtg ctg acc tcc gcc cag gtg gcc atc gat gcg gtc att   288
Ile Thr Gln Val Leu Thr Ser Ala Gln Val Ala Ile Asp Ala Val Ile
                 85                  90                  95

ctg ccg gcc aag att gtg gca ctg gcg tgg aat ttg cca ttg ctg cgc   336
Leu Pro Ala Lys Ile Val Ala Leu Ala Trp Asn Leu Pro Leu Leu Arg
            100                 105                 110

aga gca gag cat cat ctg gcc gcc ttg gat gcg cgg tgc agg gaa cag   384
Arg Ala Glu His His Leu Ala Ala Leu Asp Ala Arg Cys Arg Glu Gln
        115                 120                 125

gag gag ttc caa ttg atc ctc gat gcg gtg agg ttt tgc aac tat ctg   432
Glu Glu Phe Gln Leu Ile Leu Asp Ala Val Arg Phe Cys Asn Tyr Leu
    130                 135                 140

gta tgg ttc tac cag atc tgc tat gcc atc tac tcc tcg tcg aca ttt   480
Val Trp Phe Tyr Gln Ile Cys Tyr Ala Ile Tyr Ser Ser Ser Thr Phe
145                 150                 155                 160

gtg tgc gcc ttc ctg ctg ggc caa ccg cca tat gcc ctc tat ttg cct   528
Val Cys Ala Phe Leu Leu Gly Gln Pro Pro Tyr Ala Leu Tyr Leu Pro
                165                 170                 175

ggc ctc gat tgg cag cgt tcc cag atg cag ttc tgc atc cag gcc tgg   576
Gly Leu Asp Trp Gln Arg Ser Gln Met Gln Phe Cys Ile Gln Ala Trp
            180                 185                 190

att gag ttc ctt atc atg aac tgg acg tgc ctg cac caa gct agc gat   624
Ile Glu Phe Leu Ile Met Asn Trp Thr Cys Leu His Gln Ala Ser Asp
        195                 200                 205

gat gtg tac gcc gtt atc tat ctg tat gtg gtc cgg att caa gtg caa   672
Asp Val Tyr Ala Val Ile Tyr Leu Tyr Val Val Arg Ile Gln Val Gln
    210                 215                 220

ttg ctg gcc agg cgg gtg gag aag ctg ggc acg gat gat agt ggc cag   720
```

```
Leu Leu Ala Arg Arg Val Glu Lys Leu Gly Thr Asp Asp Ser Gly Gln
225                 230                 235                 240

gtg gag atc tat ccc gat gag cgg cgg cag gag gag cat tgc gcg gaa   768
Val Glu Ile Tyr Pro Asp Glu Arg Arg Gln Glu Glu His Cys Ala Glu
                245                 250                 255

ctg cag cgc tgc att gta gat cac cag acg atg ctg cag ctg ctc gac   816
Leu Gln Arg Cys Ile Val Asp His Gln Thr Met Leu Gln Leu Leu Asp
            260                 265                 270

tgc att agt ccc gtc atc tcg cgt acc ata ttc gtt cag ttc ctg atc   864
Cys Ile Ser Pro Val Ile Ser Arg Thr Ile Phe Val Gln Phe Leu Ile
        275                 280                 285

acc gcc gcc atc atg ggc acc acc atg atc aac att ttc att ttc gcc   912
Thr Ala Ala Ile Met Gly Thr Thr Met Ile Asn Ile Phe Ile Phe Ala
    290                 295                 300

aat acg aac acg aag atc gca tcg atc att tac ctg ctg gcg gtg acc   960
Asn Thr Asn Thr Lys Ile Ala Ser Ile Ile Tyr Leu Leu Ala Val Thr
305                 310                 315                 320

ctg cag acg gct cca tgt tgc tat cag gcc acc tcg ctg atg ttg gac   1008
Leu Gln Thr Ala Pro Cys Cys Tyr Gln Ala Thr Ser Leu Met Leu Asp
                325                 330                 335

aac gag agg ctg gcc ctg gcc atc ttc cag tgc cag tgg ctg ggc cag   1056
Asn Glu Arg Leu Ala Leu Ala Ile Phe Gln Cys Gln Trp Leu Gly Gln
            340                 345                 350

agt gcc cgg ttc cgt aag atg ctg ctc tac tat ctt cat cgc gcc cag   1104
Ser Ala Arg Phe Arg Lys Met Leu Leu Tyr Tyr Leu His Arg Ala Gln
        355                 360                 365

cag ccc atc acg ctg acc gcc atg aag ctg ttt ccc atc aat ctg gcc   1152
Gln Pro Ile Thr Leu Thr Ala Met Lys Leu Phe Pro Ile Asn Leu Ala
    370                 375                 380

acg tac ttc agt ata gcc aag ttc tcg ttt tcg ctc tac acg ctc atc   1200
Thr Tyr Phe Ser Ile Ala Lys Phe Ser Phe Ser Leu Tyr Thr Leu Ile
385                 390                 395                 400

aag ggg atg aat ctc ggc gag cga ttc aac agg aca aat               1239
Lys Gly Met Asn Leu Gly Glu Arg Phe Asn Arg Thr Asn
                405                 410
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<210> 72
<211> 413
<212> PRT
<213> Drosophila melanogaster

<400> 72
Met Ala Val Ser Thr Arg Val Ala Thr Lys Gln Glu Val Pro Glu Ser
1 5 10 15

Arg Arg Ala Phe Arg Asn Leu Phe Asn Cys Phe Tyr Ala Leu Gly Met
20 25 30

Gln Ala Pro Asp Gly Ser Arg Pro Thr Thr Ser Ser Thr Trp Gln Arg
35 40 45

Ile Tyr Ala Cys Phe Ser Val Val Met Tyr Val Trp Gln Leu Leu Leu
50 55 60

Val Pro Thr Phe Phe Val Ile Ser Tyr Arg Tyr Met Gly Gly Met Glu
65 70 75 80

Ile Thr Gln Val Leu Thr Ser Ala Gln Val Ala Ile Asp Ala Val Ile
85 90 95

Leu Pro Ala Lys Ile Val Ala Leu Ala Trp Asn Leu Pro Leu Leu Arg
100 105 110

Arg Ala Glu His His Leu Ala Ala Leu Asp Ala Arg Cys Arg Glu Gln
115 120 125

Glu Glu Phe Gln Leu Ile Leu Asp Ala Val Arg Phe Cys Asn Tyr Leu
130 135 140

Val Trp Phe Tyr Gln Ile Cys Tyr Ala Ile Tyr Ser Ser Ser Thr Phe
145 150 155 160

Val Cys Ala Phe Leu Leu Gly Gln Pro Pro Tyr Ala Leu Tyr Leu Pro
165 170 175

Gly Leu Asp Trp Gln Arg Ser Gln Met Gln Phe Cys Ile Gln Ala Trp
180 185 190

Ile Glu Phe Leu Ile Met Asn Trp Thr Cys Leu His Gln Ala Ser Asp
195 200 205

Asp Val Tyr Ala Val Ile Tyr Leu Tyr Val Val Arg Ile Gln Val Gln
210 215 220

```
Leu Leu Ala Arg Arg Val Glu Lys Leu Gly Thr Asp Asp Ser Gly Gln
225                 230                 235                 240

Val Glu Ile Tyr Pro Asp Glu Arg Arg Gln Glu Glu His Cys Ala Glu
                245                 250                 255

Leu Gln Arg Cys Ile Val Asp His Gln Thr Met Leu Gln Leu Leu Asp
            260                 265                 270

Cys Ile Ser Pro Val Ile Ser Arg Thr Ile Phe Val Gln Phe Leu Ile
        275                 280                 285

Thr Ala Ala Ile Met Gly Thr Thr Met Ile Asn Ile Phe Ile Phe Ala
    290                 295                 300

Asn Thr Asn Thr Lys Ile Ala Ser Ile Ile Tyr Leu Leu Ala Val Thr
305                 310                 315                 320

Leu Gln Thr Ala Pro Cys Cys Tyr Gln Ala Thr Ser Leu Met Leu Asp
                325                 330                 335

Asn Glu Arg Leu Ala Leu Ala Ile Phe Gln Cys Gln Trp Leu Gly Gln
            340                 345                 350

Ser Ala Arg Phe Arg Lys Met Leu Leu Tyr Tyr Leu His Arg Ala Gln
        355                 360                 365

Gln Pro Ile Thr Leu Thr Ala Met Lys Leu Phe Pro Ile Asn Leu Ala
    370                 375                 380

Thr Tyr Phe Ser Ile Ala Lys Phe Ser Phe Ser Leu Tyr Thr Leu Ile
385                 390                 395                 400

Lys Gly Met Asn Leu Gly Glu Arg Phe Asn Arg Thr Asn
                405                 410
```

<210> 73
<211> 1089
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1089)
<223> DORLU 7.1

<400> 73

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atg gac tac gat cga att cga ccg gtg cga ttt ttg acg gga gtg ctg   48
Met Asp Tyr Asp Arg Ile Arg Pro Val Arg Phe Leu Thr Gly Val Leu
  1               5                  10                  15

aaa tgg tgg cgt ctc tgg ccg agg aag gaa tcg gtg tcc aca ccg gac   96
Lys Trp Trp Arg Leu Trp Pro Arg Lys Glu Ser Val Ser Thr Pro Asp
             20                  25                  30

tgg act aac tgg cag gca tat gcc ttg cac gtt cca ttt aca ttc ttg   144
Trp Thr Asn Trp Gln Ala Tyr Ala Leu His Val Pro Phe Thr Phe Leu
         35                  40                  45

ttt gtg ttg ctt ttg tgg ttg gag gca atc aag agc agg gat ata cag   192
Phe Val Leu Leu Leu Trp Leu Glu Ala Ile Lys Ser Arg Asp Ile Gln
     50                  55                  60

cat acc gcc gat gtc ctt ttg att tgc cta acc acc act gcc ttg gga   240
His Thr Ala Asp Val Leu Leu Ile Cys Leu Thr Thr Thr Ala Leu Gly
 65                  70                  75                  80

ggt aaa gtt atc aat atc tgg aag tat gcc cat gtg gcc caa ggc att   288
Gly Lys Val Ile Asn Ile Trp Lys Tyr Ala His Val Ala Gln Gly Ile
                 85                  90                  95

ttg tcc gag tgg agc acg tgg gat ctt ttc gag ctg agg agc aaa cag   336
Leu Ser Glu Trp Ser Thr Trp Asp Leu Phe Glu Leu Arg Ser Lys Gln
            100                 105                 110

gaa gtg gat atg tgg cga ttc gag cat cga cgt ttc aat cgt gtt ttt   384
Glu Val Asp Met Trp Arg Phe Glu His Arg Arg Phe Asn Arg Val Phe
        115                 120                 125

atg ttt tac tgt ttg tgc agt gct ggt gta atc cca ttt att gtg att   432
Met Phe Tyr Cys Leu Cys Ser Ala Gly Val Ile Pro Phe Ile Val Ile
    130                 135                 140

caa ccg ttg ttt gat atc cca aat cga ttg ccc ttc tgg atg tgg aca   480
Gln Pro Leu Phe Asp Ile Pro Asn Arg Leu Pro Phe Trp Met Trp Thr
145                 150                 155                 160

cca ttc gat tgg cag cag cct gtt ctc tta tgg tat gca ttc atc tat   528
Pro Phe Asp Trp Gln Gln Pro Val Leu Leu Trp Tyr Ala Phe Ile Tyr
                165                 170                 175

cag gcc aca acc att cct att gcc tgt gct tgc aac gta acc atg gac   576
Gln Ala Thr Thr Ile Pro Ile Ala Cys Ala Cys Asn Val Thr Met Asp
            180                 185                 190
```

```
gct gtt aat tgg tac ttg atg ctg cat ctg tcc ttg tgt ttg cgt atg   624
Ala Val Asn Trp Tyr Leu Met Leu His Leu Ser Leu Cys Leu Arg Met
        195                 200                 205

ttg ggc cag cga ttg agt aag ctt cag cat gat gac aag gat ctg agg   672
Leu Gly Gln Arg Leu Ser Lys Leu Gln His Asp Asp Lys Asp Leu Arg
    210                 215                 220

gag aag ttc ctg gaa ctg atc cat ctg cac cag cga ctc aag caa cag   720
Glu Lys Phe Leu Glu Leu Ile His Leu His Gln Arg Leu Lys Gln Gln
225                 230                 235                 240

gcc ttg agc att gaa atc ttt att tcg aag agc acg ttc acc caa att   768
Ala Leu Ser Ile Glu Ile Phe Ile Ser Lys Ser Thr Phe Thr Gln Ile
                245                 250                 255

ctg gtc agt tcc ctt atc att tgc ttc acc att tac agc atg cag atg   816
Leu Val Ser Ser Leu Ile Ile Cys Phe Thr Ile Tyr Ser Met Gln Met
            260                 265                 270

tac cta gtg gcc atg atc atg cag gtc atg ctg ccc acc ata tat ggt   864
Tyr Leu Val Ala Met Ile Met Gln Val Met Leu Pro Thr Ile Tyr Gly
        275                 280                 285

aac gcc gtc atc gat tct gca aat atg ttg acc gat tcc atg tac aat   912
Asn Ala Val Ile Asp Ser Ala Asn Met Leu Thr Asp Ser Met Tyr Asn
    290                 295                 300

tcg gat tgg ccg gat atg aat tgc cga atg cgt cgc cta gtt tta atg   960
Ser Asp Trp Pro Asp Met Asn Cys Arg Met Arg Arg Leu Val Leu Met
305                 310                 315                 320

ttt atg gtg tac tta aat cga ccg gtg acc tta aaa gcc ggt ggc ttt   1008
Phe Met Val Tyr Leu Asn Arg Pro Val Thr Leu Lys Ala Gly Gly Phe
                325                 330                 335

ttt cat att ggt tta cct ctg ttt acc aag acc atg aat caa gca tac   1056
Phe His Ile Gly Leu Pro Leu Phe Thr Lys Thr Met Asn Gln Ala Tyr
            340                 345                 350

agt ttg ctg gcc ttg ctg ctc aac atg aac caa                      1089
Ser Leu Leu Ala Leu Leu Leu Asn Met Asn Gln
        355                 360
```

<210> 74
<211> 363

<212> PRT
<213> Drosophila melanogaster

<400> 74

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Met Asp Tyr Asp Arg Ile Arg Pro Val Arg Phe Leu Thr Gly Val Leu
  1               5                  10                  15

Lys Trp Trp Arg Leu Trp Pro Arg Lys Glu Ser Val Ser Thr Pro Asp
             20                  25                  30

Trp Thr Asn Trp Gln Ala Tyr Ala Leu His Val Pro Phe Thr Phe Leu
         35                  40                  45

Phe Val Leu Leu Leu Trp Leu Glu Ala Ile Lys Ser Arg Asp Ile Gln
     50                  55                  60

His Thr Ala Asp Val Leu Leu Ile Cys Leu Thr Thr Thr Ala Leu Gly
 65                  70                  75                  80

Gly Lys Val Ile Asn Ile Trp Lys Tyr Ala His Val Ala Gln Gly Ile
                 85                  90                  95

Leu Ser Glu Trp Ser Thr Trp Asp Leu Phe Glu Leu Arg Ser Lys Gln
            100                 105                 110

Glu Val Asp Met Trp Arg Phe Glu His Arg Arg Phe Asn Arg Val Phe
        115                 120                 125

Met Phe Tyr Cys Leu Cys Ser Ala Gly Val Ile Pro Phe Ile Val Ile
    130                 135                 140

Gln Pro Leu Phe Asp Ile Pro Asn Arg Leu Pro Phe Trp Met Trp Thr
145                 150                 155                 160

Pro Phe Asp Trp Gln Gln Pro Val Leu Leu Trp Tyr Ala Phe Ile Tyr
                165                 170                 175

Gln Ala Thr Thr Ile Pro Ile Ala Cys Ala Cys Asn Val Thr Met Asp
            180                 185                 190

Ala Val Asn Trp Tyr Leu Met Leu His Leu Ser Leu Cys Leu Arg Met
        195                 200                 205

Leu Gly Gln Arg Leu Ser Lys Leu Gln His Asp Asp Lys Asp Leu Arg
    210                 215                 220

Glu Lys Phe Leu Glu Leu Ile His Leu His Gln Arg Leu Lys Gln Gln
225                 230                 235                 240
```

```
Ala Leu Ser Ile Glu Ile Phe Ile Ser Lys Ser Thr Phe Thr Gln Ile
                245                 250                 255

Leu Val Ser Ser Leu Ile Ile Cys Phe Thr Ile Tyr Ser Met Gln Met
            260                 265                 270

Tyr Leu Val Ala Met Ile Met Gln Val Met Leu Pro Thr Ile Tyr Gly
        275                 280                 285

Asn Ala Val Ile Asp Ser Ala Asn Met Leu Thr Asp Ser Met Tyr Asn
    290                 295                 300

Ser Asp Trp Pro Asp Met Asn Cys Arg Met Arg Arg Leu Val Leu Met
305                 310                 315                 320

Phe Met Val Tyr Leu Asn Arg Pro Val Thr Leu Lys Ala Gly Gly Phe
                325                 330                 335

Phe His Ile Gly Leu Pro Leu Phe Thr Lys Thr Met Asn Gln Ala Tyr
            340                 345                 350

Ser Leu Leu Ala Leu Leu Leu Asn Met Asn Gln
        355                 360
```

<210> 75
<211> 1176
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1176)
<223> DORLU 9.1

<400> 75

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atg agc gac aag gtg aag gga aaa aag cag gag gaa aag gat caa tcc   48
Met Ser Asp Lys Val Lys Gly Lys Lys Gln Glu Glu Lys Asp Gln Ser
  1               5                  10                  15

ttg cgg gtg caa att ctc gtt tat cgc tgc atg ggc atc gat ttg tgg   96
Leu Arg Val Gln Ile Leu Val Tyr Arg Cys Met Gly Ile Asp Leu Trp
             20                  25                  30

agc ccc acg atg gcg aat gac cgc ccg tgg ctg acc ttt gtc aca atg   144
Ser Pro Thr Met Ala Asn Asp Arg Pro Trp Leu Thr Phe Val Thr Met
```

```
         35                  40                  45

gga cca ctt ttc ctg ttt atg gtg ccc atg ttc ctg gcc gcc cac gag   192
Gly Pro Leu Phe Leu Phe Met Val Pro Met Phe Leu Ala Ala His Glu
     50                  55                  60

tac atc acc cag gtg agc ctg ctc tcc gac acc ctg ggc tcc acc ttc   240
Tyr Ile Thr Gln Val Ser Leu Leu Ser Asp Thr Leu Gly Ser Thr Phe
 65                  70                  75                  80

gcc agc atg ctc acc ctg gtc aaa ttc ctg ctc ttc tgc tat cat cgc   288
Ala Ser Met Leu Thr Leu Val Lys Phe Leu Leu Phe Cys Tyr His Arg
                 85                  90                  95

aag gag ttc gtc ggc ctg atc tac cac atc agg gcc att ctg gct aaa   336
Lys Glu Phe Val Gly Leu Ile Tyr His Ile Arg Ala Ile Leu Ala Lys
            100                 105                 110

gaa atc gaa gtg tgg cct gat gcg cgg gaa atc atc gag gtg gag aac   384
Glu Ile Glu Val Trp Pro Asp Ala Arg Glu Ile Ile Glu Val Glu Asn
        115                 120                 125

caa agt gac caa atg ctc agt ctt acg tac act cgc tgt ttt gga ctg   432
Gln Ser Asp Gln Met Leu Ser Leu Thr Tyr Thr Arg Cys Phe Gly Leu
    130                 135                 140

gct gga atc ttt gcg gcc ctg aag ccc ttt gtg ggc atc ata ctc tcc   480
Ala Gly Ile Phe Ala Ala Leu Lys Pro Phe Val Gly Ile Ile Leu Ser
145                 150                 155                 160

tcg att cgc ggc gac gag att cac ctg gag ctg ccc cac aac ggc gtt   528
Ser Ile Arg Gly Asp Glu Ile His Leu Glu Leu Pro His Asn Gly Val
                165                 170                 175

tac ccg tac gat ctc cag gtg gtc atg ttt tat gtg ccc acc tat ctg   576
Tyr Pro Tyr Asp Leu Gln Val Val Met Phe Tyr Val Pro Thr Tyr Leu
            180                 185                 190

tgg aat gtg atg gcc agc tat agt gct gta acc atg gca ctc tgc gtg   624
Trp Asn Val Met Ala Ser Tyr Ser Ala Val Thr Met Ala Leu Cys Val
        195                 200                 205

gac tcg ctg ctc ttc ttt ttc acc tac aac gtg tgc gcc att ttc aag   672
Asp Ser Leu Leu Phe Phe Phe Thr Tyr Asn Val Cys Ala Ile Phe Lys
    210                 215                 220

atc gcc aag cac cgg atg atc cat ctg ccg gcg gtg ggc gga aag gag   720
Ile Ala Lys His Arg Met Ile His Leu Pro Ala Val Gly Gly Lys Glu
```

```
225                 230                 235                 240

gag ctg gag ggg ctc gtc cag gtg ctg ctg ctg cac cag aag ggc ctc   768
Glu Leu Glu Gly Leu Val Gln Val Leu Leu Leu His Gln Lys Gly Leu
                245                 250                 255

cag atc gcc gat cac att gcg gac aag tac cgg ccg ctg atc ttt ttg   816
Gln Ile Ala Asp His Ile Ala Asp Lys Tyr Arg Pro Leu Ile Phe Leu
            260                 265                 270

cag ttc ttt ctg tcc gcc ttg cag atc tgc ttc att gga ttc cag gtg   864
Gln Phe Phe Leu Ser Ala Leu Gln Ile Cys Phe Ile Gly Phe Gln Val
        275                 280                 285

gct gat ctg ttt ccc aat ccg cag agt ctc tac ttt atc gcc ttt gtg   912
Ala Asp Leu Phe Pro Asn Pro Gln Ser Leu Tyr Phe Ile Ala Phe Val
    290                 295                 300

ggc tcg ctg ctc atc gca ctg ttc atc tac tcg aag tgc ggc gaa aat   960
Gly Ser Leu Leu Ile Ala Leu Phe Ile Tyr Ser Lys Cys Gly Glu Asn
305                 310                 315                 320

atc aag agt gcc agc ctg gat ttc gga aac ggg ctg tac gag acc aac   1008
Ile Lys Ser Ala Ser Leu Asp Phe Gly Asn Gly Leu Tyr Glu Thr Asn
                325                 330                 335

tgg acc gac ttc tcg cca ccc act aaa aga gcc ctc ctc att gcc gcc   1056
Trp Thr Asp Phe Ser Pro Pro Thr Lys Arg Ala Leu Leu Ile Ala Ala
            340                 345                 350

atg cgc gcc cag cga cct tgc cag atg aag ggc tac ttt ttc gag gcc   1104
Met Arg Ala Gln Arg Pro Cys Gln Met Lys Gly Tyr Phe Phe Glu Ala
        355                 360                 365

agc atg gcc acc ttc tcg acg att gtt cgc tct gcc gtg tcg tac atc   1152
Ser Met Ala Thr Phe Ser Thr Ile Val Arg Ser Ala Val Ser Tyr Ile
    370                 375                 380

atg atg ttg cgc tcc ttt aat gcc                                  1176
Met Met Leu Arg Ser Phe Asn Ala
385                 390
```

<210> 76
<211> 392
<212> PRT
<213> Drosophila melanogaster

<400> 76

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Met Ser Asp Lys Val Lys Gly Lys Lys Gln Glu Glu Lys Asp Gln Ser
  1               5                  10                  15

Leu Arg Val Gln Ile Leu Val Tyr Arg Cys Met Gly Ile Asp Leu Trp
             20                  25                  30

Ser Pro Thr Met Ala Asn Asp Arg Pro Trp Leu Thr Phe Val Thr Met
         35                  40                  45

Gly Pro Leu Phe Leu Phe Met Val Pro Met Phe Leu Ala Ala His Glu
     50                  55                  60

Tyr Ile Thr Gln Val Ser Leu Leu Ser Asp Thr Leu Gly Ser Thr Phe
 65                  70                  75                  80

Ala Ser Met Leu Thr Leu Val Lys Phe Leu Leu Phe Cys Tyr His Arg
                 85                  90                  95

Lys Glu Phe Val Gly Leu Ile Tyr His Ile Arg Ala Ile Leu Ala Lys
            100                 105                 110

Glu Ile Glu Val Trp Pro Asp Ala Arg Glu Ile Ile Glu Val Glu Asn
        115                 120                 125

Gln Ser Asp Gln Met Leu Ser Leu Thr Tyr Thr Arg Cys Phe Gly Leu
    130                 135                 140

Ala Gly Ile Phe Ala Ala Leu Lys Pro Phe Val Gly Ile Ile Leu Ser
145                 150                 155                 160

Ser Ile Arg Gly Asp Glu Ile His Leu Glu Leu Pro His Asn Gly Val
                165                 170                 175

Tyr Pro Tyr Asp Leu Gln Val Val Met Phe Tyr Val Pro Thr Tyr Leu
            180                 185                 190

Trp Asn Val Met Ala Ser Tyr Ser Ala Val Thr Met Ala Leu Cys Val
        195                 200                 205

Asp Ser Leu Leu Phe Phe Phe Thr Tyr Asn Val Cys Ala Ile Phe Lys
    210                 215                 220

Ile Ala Lys His Arg Met Ile His Leu Pro Ala Val Gly Gly Lys Glu
225                 230                 235                 240

Glu Leu Glu Gly Leu Val Gln Val Leu Leu Leu His Gln Lys Gly Leu
                245                 250                 255
```

```
Gln Ile Ala Asp His Ile Ala Asp Lys Tyr Arg Pro Leu Ile Phe Leu
            260                 265                 270

Gln Phe Phe Leu Ser Ala Leu Gln Ile Cys Phe Ile Gly Phe Gln Val
        275                 280                 285

Ala Asp Leu Phe Pro Asn Pro Gln Ser Leu Tyr Phe Ile Ala Phe Val
    290                 295                 300

Gly Ser Leu Leu Ile Ala Leu Phe Ile Tyr Ser Lys Cys Gly Glu Asn
305                 310                 315                 320

Ile Lys Ser Ala Ser Leu Asp Phe Gly Asn Gly Leu Tyr Glu Thr Asn
                325                 330                 335

Trp Thr Asp Phe Ser Pro Pro Thr Lys Arg Ala Leu Leu Ile Ala Ala
            340                 345                 350

Met Arg Ala Gln Arg Pro Cys Gln Met Lys Gly Tyr Phe Phe Glu Ala
        355                 360                 365

Ser Met Ala Thr Phe Ser Thr Ile Val Arg Ser Ala Val Ser Tyr Ile
    370                 375                 380

Met Met Leu Arg Ser Phe Asn Ala
385                 390
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<210> 77
<211> 1221
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1221)
<223> DORLU 12.1

<400> 77

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atg gat aac gtc gcg gaa atg cct gaa gaa aag tat gtc gaa gtc gat   48
Met Asp Asn Val Ala Glu Met Pro Glu Glu Lys Tyr Val Glu Val Asp
  1               5                  10                  15

gat ttt ttg agg cta gct gtg aaa ttc tac aat act ttg ggc att gat   96
Asp Phe Leu Arg Leu Ala Val Lys Phe Tyr Asn Thr Leu Gly Ile Asp
            20                  25                  30
```

```
ccc tat gaa act gga cga aaa cga act att tgg ttt caa ata tat ttc   144
Pro Tyr Glu Thr Gly Arg Lys Arg Thr Ile Trp Phe Gln Ile Tyr Phe
         35                  40                  45

gca ttg aat atg ttt aat atg gtg ttt agt ttt tat gcc gag gta gcg   192
Ala Leu Asn Met Phe Asn Met Val Phe Ser Phe Tyr Ala Glu Val Ala
     50                  55                  60

act ctg gtg gac agg tta cgc gat aat gaa aat ttt ctc gag agc tgc   240
Thr Leu Val Asp Arg Leu Arg Asp Asn Glu Asn Phe Leu Glu Ser Cys
 65                  70                  75                  80

atc tta ctg agc tac gtg tcc ttt gtg gtc atg ggc ctc tcc aag ata   288
Ile Leu Leu Ser Tyr Val Ser Phe Val Val Met Gly Leu Ser Lys Ile
                 85                  90                  95

ggt gct gta atg aaa aaa aag cca aaa atg aca gct ttg gtc agg caa   336
Gly Ala Val Met Lys Lys Lys Pro Lys Met Thr Ala Leu Val Arg Gln
            100                 105                 110

ttg gag acc tgc ttt ccg tcg cca agt gca aag gtt caa gag gaa tat   384
Leu Glu Thr Cys Phe Pro Ser Pro Ser Ala Lys Val Gln Glu Glu Tyr
        115                 120                 125

gct gtg aag tcc tgg ctg aaa cgc tgc cat ata tac aca aag gga ttt   432
Ala Val Lys Ser Trp Leu Lys Arg Cys His Ile Tyr Thr Lys Gly Phe
    130                 135                 140

ggt ggt ctc ttc atg atc atg tat ttc gct cac gct ctg att ccc tta   480
Gly Gly Leu Phe Met Ile Met Tyr Phe Ala His Ala Leu Ile Pro Leu
145                 150                 155                 160

ttc ata tac ttc att caa aga gtg ctg ctc cac tat ccg gat gcc aag   528
Phe Ile Tyr Phe Ile Gln Arg Val Leu Leu His Tyr Pro Asp Ala Lys
                165                 170                 175

cag att atg ccg ttt tac caa ctc gaa cct tgg gaa ttt cgc gac tcc   576
Gln Ile Met Pro Phe Tyr Gln Leu Glu Pro Trp Glu Phe Arg Asp Ser
            180                 185                 190

tgg ttg ttt tat cca agc tat ttt cac cag tcg tcg gcc gga tat acg   624
Trp Leu Phe Tyr Pro Ser Tyr Phe His Gln Ser Ser Ala Gly Tyr Thr
        195                 200                 205

gct aca tgt gga tcc att gcc ggt gac cta atg atc ttc gct gtg gtc   672
Ala Thr Cys Gly Ser Ile Ala Gly Asp Leu Met Ile Phe Ala Val Val
    210                 215                 220
```

```
ctg cag gtc atc atg cac tac gaa aga ctg gcc aag gtt ctt agg gag   720
Leu Gln Val Ile Met His Tyr Glu Arg Leu Ala Lys Val Leu Arg Glu
225                 230                 235                 240

ttt aag att caa gcc cat aac gca ccc aat gga gct aag gag gat ata   768
Phe Lys Ile Gln Ala His Asn Ala Pro Asn Gly Ala Lys Glu Asp Ile
                245                 250                 255

agg aag ttg cag tcc cta gtc gcc aat cac att gat ata ctt cga ctc   816
Arg Lys Leu Gln Ser Leu Val Ala Asn His Ile Asp Ile Leu Arg Leu
            260                 265                 270

act gat ctg atg aac gag gtc ttt gga att ccc ttg ttg cta aac ttt   864
Thr Asp Leu Met Asn Glu Val Phe Gly Ile Pro Leu Leu Leu Asn Phe
        275                 280                 285

att gca tct gcg ctg ctg gtc tgc ctg gtg gga gtt caa tta acc atc   912
Ile Ala Ser Ala Leu Leu Val Cys Leu Val Gly Val Gln Leu Thr Ile
    290                 295                 300

gct tta agt cca gag tat ttt tgc aag cag atg cta ttt ctg att tcc   960
Ala Leu Ser Pro Glu Tyr Phe Cys Lys Gln Met Leu Phe Leu Ile Ser
305                 310                 315                 320

gta ctg ctt gag gtc tat ctc ctt tgc tcc ttc agc cag agg tta ata   1008
Val Leu Leu Glu Val Tyr Leu Leu Cys Ser Phe Ser Gln Arg Leu Ile
                325                 330                 335

gat gct agc gaa aac gtg ggc cat gcg gca tac gat atg gat tgg tta   1056
Asp Ala Ser Glu Asn Val Gly His Ala Ala Tyr Asp Met Asp Trp Leu
            340                 345                 350

ggt tcc gac aaa cga ttc aag aaa att tta att ttt ata tct atg cga   1104
Gly Ser Asp Lys Arg Phe Lys Lys Ile Leu Ile Phe Ile Ser Met Arg
        355                 360                 365

tcc cag aag cca gtt tgc ctt aaa gcc aca gtt gtc ttg gac tta tcc   1152
Ser Gln Lys Pro Val Cys Leu Lys Ala Thr Val Val Leu Asp Leu Ser
    370                 375                 380

atg cca act atg agc atc ttt ctt ggt atg tcg tat aag ttt ttc tgc   1200
Met Pro Thr Met Ser Ile Phe Leu Gly Met Ser Tyr Lys Phe Phe Cys
385                 390                 395                 400

gct gtg agg act atg tat caa                                      1221
Ala Val Arg Thr Met Tyr Gln
                405
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<210> 78
<211> 407
<212> PRT
<213> Drosophila melanogaster

<400> 78
Met Asp Asn Val Ala Glu Met Pro Glu Glu Lys Tyr Val Glu Val Asp
1 5 10 15

Asp Phe Leu Arg Leu Ala Val Lys Phe Tyr Asn Thr Leu Gly Ile Asp
20 25 30

Pro Tyr Glu Thr Gly Arg Lys Arg Thr Ile Trp Phe Gln Ile Tyr Phe
35 40 45

Ala Leu Asn Met Phe Asn Met Val Phe Ser Phe Tyr Ala Glu Val Ala
50 55 60

Thr Leu Val Asp Arg Leu Arg Asp Asn Glu Asn Phe Leu Glu Ser Cys
65 70 75 80

Ile Leu Leu Ser Tyr Val Ser Phe Val Val Met Gly Leu Ser Lys Ile
85 90 95

Gly Ala Val Met Lys Lys Lys Pro Lys Met Thr Ala Leu Val Arg Gln
100 105 110

Leu Glu Thr Cys Phe Pro Ser Pro Ser Ala Lys Val Gln Glu Glu Tyr
115 120 125

Ala Val Lys Ser Trp Leu Lys Arg Cys His Ile Tyr Thr Lys Gly Phe
130 135 140

Gly Gly Leu Phe Met Ile Met Tyr Phe Ala His Ala Leu Ile Pro Leu
145 150 155 160

Phe Ile Tyr Phe Ile Gln Arg Val Leu Leu His Tyr Pro Asp Ala Lys
165 170 175

Gln Ile Met Pro Phe Tyr Gln Leu Glu Pro Trp Glu Phe Arg Asp Ser
180 185 190

Trp Leu Phe Tyr Pro Ser Tyr Phe His Gln Ser Ser Ala Gly Tyr Thr
195 200 205

Ala Thr Cys Gly Ser Ile Ala Gly Asp Leu Met Ile Phe Ala Val Val

```
    210                 215                 220

Leu Gln Val Ile Met His Tyr Glu Arg Leu Ala Lys Val Leu Arg Glu
225                 230                 235                 240

Phe Lys Ile Gln Ala His Asn Ala Pro Asn Gly Ala Lys Glu Asp Ile
                245                 250                 255

Arg Lys Leu Gln Ser Leu Val Ala Asn His Ile Asp Ile Leu Arg Leu
            260                 265                 270

Thr Asp Leu Met Asn Glu Val Phe Gly Ile Pro Leu Leu Leu Asn Phe
        275                 280                 285

Ile Ala Ser Ala Leu Leu Val Cys Leu Val Gly Val Gln Leu Thr Ile
    290                 295                 300

Ala Leu Ser Pro Glu Tyr Phe Cys Lys Gln Met Leu Phe Leu Ile Ser
305                 310                 315                 320

Val Leu Leu Glu Val Tyr Leu Leu Cys Ser Phe Ser Gln Arg Leu Ile
                325                 330                 335

Asp Ala Ser Glu Asn Val Gly His Ala Ala Tyr Asp Met Asp Trp Leu
            340                 345                 350

Gly Ser Asp Lys Arg Phe Lys Lys Ile Leu Ile Phe Ile Ser Met Arg
        355                 360                 365

Ser Gln Lys Pro Val Cys Leu Lys Ala Thr Val Val Leu Asp Leu Ser
    370                 375                 380

Met Pro Thr Met Ser Ile Phe Leu Gly Met Ser Tyr Lys Phe Phe Cys
385                 390                 395                 400

Ala Val Arg Thr Met Tyr Gln
                405
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<210> 79
<211> 1212
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1212)

<223> DORLU 13.1

<400> 79

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atg gaa aca gcg aag gat aat aca gcc agg act ttt atg gaa ttg atg   48
Met Glu Thr Ala Lys Asp Asn Thr Ala Arg Thr Phe Met Glu Leu Met
  1               5                  10                  15

cga gtg cca gta cag ttt tac aga acg att gga gag gat atc tac gcc   96
Arg Val Pro Val Gln Phe Tyr Arg Thr Ile Gly Glu Asp Ile Tyr Ala
             20                  25                  30

cat cga tcc acg aat ccc cta aaa tcg ctt ctc ttc aag atc tat cta   144
His Arg Ser Thr Asn Pro Leu Lys Ser Leu Leu Phe Lys Ile Tyr Leu
         35                  40                  45

tat gcg gga ttc ata aat ttt aat ctg ttg gta atc ggt gaa ctg gtg   192
Tyr Ala Gly Phe Ile Asn Phe Asn Leu Leu Val Ile Gly Glu Leu Val
     50                  55                  60

ttc ttc tac aac tca att cag gac ttt gaa acc att cga ttg gcc atc   240
Phe Phe Tyr Asn Ser Ile Gln Asp Phe Glu Thr Ile Arg Leu Ala Ile
 65                  70                  75                  80

gcg gtg gct cca tgt atc gga ttt tct ctg gtt gct gat ttt aaa caa   288
Ala Val Ala Pro Cys Ile Gly Phe Ser Leu Val Ala Asp Phe Lys Gln
                 85                  90                  95

gct gcc atg att aga ggc aag aaa aca cta att atg cta ctc gat gat   336
Ala Ala Met Ile Arg Gly Lys Lys Thr Leu Ile Met Leu Leu Asp Asp
            100                 105                 110

ttg gag aac atg cat ccg aaa acc ctg gca aag caa atg gaa tac aaa   384
Leu Glu Asn Met His Pro Lys Thr Leu Ala Lys Gln Met Glu Tyr Lys
        115                 120                 125

ttg ccg gac ttt gaa aag acc atg aaa cgt gtg atc aat ata ttc acc   432
Leu Pro Asp Phe Glu Lys Thr Met Lys Arg Val Ile Asn Ile Phe Thr
    130                 135                 140

ttt ctc tgc ttg gcc tat acg act acg ttc tcc ttt tat ccg gcc atc   480
Phe Leu Cys Leu Ala Tyr Thr Thr Thr Phe Ser Phe Tyr Pro Ala Ile
145                 150                 155                 160

aag gca tcc gtg aaa ttt aat ttc ttg ggc tac gac acc ttt gat cga   528
Lys Ala Ser Val Lys Phe Asn Phe Leu Gly Tyr Asp Thr Phe Asp Arg
                165                 170                 175

aat ttt ggt ttc ctc atc tgg ttt ccc ttc gat gca aca agg aat aat   576
```

```
Asn Phe Gly Phe Leu Ile Trp Phe Pro Phe Asp Ala Thr Arg Asn Asn
            180                 185                 190

ttg ata tac tgg atc atg tac tgg gac ata gcc cat ggg gcc tat cta   624
Leu Ile Tyr Trp Ile Met Tyr Trp Asp Ile Ala His Gly Ala Tyr Leu
        195                 200                 205

gcg ggt att gct ttt ctc tgc gcc gat ctt ttg ctc gtc gta gtc att   672
Ala Gly Ile Ala Phe Leu Cys Ala Asp Leu Leu Leu Val Val Val Ile
    210                 215                 220

acc cag att tgt atg cac ttt aac tat ata tct atg cga tta gag gat   720
Thr Gln Ile Cys Met His Phe Asn Tyr Ile Ser Met Arg Leu Glu Asp
225                 230                 235                 240

cat cca tgt aat tcg aat gag gac aaa gag aat ata gag ttt ctt att   768
His Pro Cys Asn Ser Asn Glu Asp Lys Glu Asn Ile Glu Phe Leu Ile
                245                 250                 255

ggc att atc aga tac cat gac aag tgc ctt aaa cta tgc gaa cat gtc   816
Gly Ile Ile Arg Tyr His Asp Lys Cys Leu Lys Leu Cys Glu His Val
            260                 265                 270

aac gat ctg tat agt ttc tct ttg ctg ctt aat ttc ctt atg gca tcc   864
Asn Asp Leu Tyr Ser Phe Ser Leu Leu Leu Asn Phe Leu Met Ala Ser
        275                 280                 285

atg cag att tgt ttc ata gcc ttt cag gtc acc gaa tca aca gtg gaa   912
Met Gln Ile Cys Phe Ile Ala Phe Gln Val Thr Glu Ser Thr Val Glu
    290                 295                 300

gtg att att att tac tgc att ttt ttg atg acc tcg atg gtt cag gta   960
Val Ile Ile Ile Tyr Cys Ile Phe Leu Met Thr Ser Met Val Gln Val
305                 310                 315                 320

ttt atg gtg tgc tac tat ggg gat act tta att gcc gcg agc ttg aaa  1008
Phe Met Val Cys Tyr Tyr Gly Asp Thr Leu Ile Ala Ala Ser Leu Lys
                325                 330                 335

gtg ggc gat gcc gct tac aac caa aag tgg ttt cag tgc agc aaa tcc  1056
Val Gly Asp Ala Ala Tyr Asn Gln Lys Trp Phe Gln Cys Ser Lys Ser
            340                 345                 350

tat tgc acc atg ttg aag ttg cta atc atg agg agt cag aaa cca gct  1104
Tyr Cys Thr Met Leu Lys Leu Leu Ile Met Arg Ser Gln Lys Pro Ala
        355                 360                 365

tca ata aga ccg ccg act ttt ccc ccc ata tcc ttg gtt acc tat atg  1152
```

```
Ser Ile Arg Pro Pro Thr Phe Pro Pro Ile Ser Leu Val Thr Tyr Met
    370                 375                 380

aag gtc atc agc atg tcg tat caa ttt ttt gcc tta ctt aga acc aca   1200
Lys Val Ile Ser Met Ser Tyr Gln Phe Phe Ala Leu Leu Arg Thr Thr
385                 390                 395                 400

tac agc aat aat                                                   1212
Tyr Ser Asn Asn
```

<210> 80
<211> 404
<212> PRT
<213> Drosophila melanogaster

<400> 80

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Met Glu Thr Ala Lys Asp Asn Thr Ala Arg Thr Phe Met Glu Leu Met
  1               5                  10                  15

Arg Val Pro Val Gln Phe Tyr Arg Thr Ile Gly Glu Asp Ile Tyr Ala
             20                  25                  30

His Arg Ser Thr Asn Pro Leu Lys Ser Leu Leu Phe Lys Ile Tyr Leu
         35                  40                  45

Tyr Ala Gly Phe Ile Asn Phe Asn Leu Leu Val Ile Gly Glu Leu Val
     50                  55                  60

Phe Phe Tyr Asn Ser Ile Gln Asp Phe Glu Thr Ile Arg Leu Ala Ile
 65                  70                  75                  80

Ala Val Ala Pro Cys Ile Gly Phe Ser Leu Val Ala Asp Phe Lys Gln
                 85                  90                  95

Ala Ala Met Ile Arg Gly Lys Lys Thr Leu Ile Met Leu Leu Asp Asp
            100                 105                 110

Leu Glu Asn Met His Pro Lys Thr Leu Ala Lys Gln Met Glu Tyr Lys
        115                 120                 125

Leu Pro Asp Phe Glu Lys Thr Met Lys Arg Val Ile Asn Ile Phe Thr
    130                 135                 140

Phe Leu Cys Leu Ala Tyr Thr Thr Thr Phe Ser Phe Tyr Pro Ala Ile
145                 150                 155                 160

Lys Ala Ser Val Lys Phe Asn Phe Leu Gly Tyr Asp Thr Phe Asp Arg
```

```
                165                 170                 175

Asn Phe Gly Phe Leu Ile Trp Phe Pro Phe Asp Ala Thr Arg Asn Asn
            180                 185                 190

Leu Ile Tyr Trp Ile Met Tyr Trp Asp Ile Ala His Gly Ala Tyr Leu
        195                 200                 205

Ala Gly Ile Ala Phe Leu Cys Ala Asp Leu Leu Leu Val Val Val Ile
    210                 215                 220

Thr Gln Ile Cys Met His Phe Asn Tyr Ile Ser Met Arg Leu Glu Asp
225                 230                 235                 240

His Pro Cys Asn Ser Asn Glu Asp Lys Glu Asn Ile Glu Phe Leu Ile
                245                 250                 255

Gly Ile Ile Arg Tyr His Asp Lys Cys Leu Lys Leu Cys Glu His Val
            260                 265                 270

Asn Asp Leu Tyr Ser Phe Ser Leu Leu Leu Asn Phe Leu Met Ala Ser
        275                 280                 285

Met Gln Ile Cys Phe Ile Ala Phe Gln Val Thr Glu Ser Thr Val Glu
    290                 295                 300

Val Ile Ile Ile Tyr Cys Ile Phe Leu Met Thr Ser Met Val Gln Val
305                 310                 315                 320

Phe Met Val Cys Tyr Tyr Gly Asp Thr Leu Ile Ala Ala Ser Leu Lys
                325                 330                 335

Val Gly Asp Ala Ala Tyr Asn Gln Lys Trp Phe Gln Cys Ser Lys Ser
            340                 345                 350

Tyr Cys Thr Met Leu Lys Leu Leu Ile Met Arg Ser Gln Lys Pro Ala
        355                 360                 365

Ser Ile Arg Pro Pro Thr Phe Pro Pro Ile Ser Leu Val Thr Tyr Met
    370                 375                 380

Lys Val Ile Ser Met Ser Tyr Gln Phe Phe Ala Leu Leu Arg Thr Thr
385                 390                 395                 400

Tyr Ser Asn Asn
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<210> 81
<211> 1179
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1179)
<223> DORLU 14.1

<400> 81
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atg gaa cct gtg cag tac agc tac gag gat ttc gct cga ttg ccc acg   48
Met Glu Pro Val Gln Tyr Ser Tyr Glu Asp Phe Ala Arg Leu Pro Thr
  1               5                  10                  15

acg gtg ttc tgg atc atg ggc tac gac atg ctg ggc gtt ccg aag acc   96
Thr Val Phe Trp Ile Met Gly Tyr Asp Met Leu Gly Val Pro Lys Thr
             20                  25                  30

cgc tct cgc agg ata cta tac tgg ata tat cgt ttc ctc tgt ctc gcc   144
Arg Ser Arg Arg Ile Leu Tyr Trp Ile Tyr Arg Phe Leu Cys Leu Ala
         35                  40                  45

agc cat ggg gtc tgt gta gga gtc atg gta ttt cgt atg gtg gag gca   192
Ser His Gly Val Cys Val Gly Val Met Val Phe Arg Met Val Glu Ala
     50                  55                  60

aag acc att gac aat gtt tcg ctg atc atg cgg tat gcc act ctg gtc   240
Lys Thr Ile Asp Asn Val Ser Leu Ile Met Arg Tyr Ala Thr Leu Val
 65                  70                  75                  80

acc tat atc atc aac tcg gat acg aaa ttc gca act gtc tta caa agg   288
Thr Tyr Ile Ile Asn Ser Asp Thr Lys Phe Ala Thr Val Leu Gln Arg
                 85                  90                  95

agt gca att caa agt cta aac tca aaa ctg gcc gaa cta tat ccg aag   336
Ser Ala Ile Gln Ser Leu Asn Ser Lys Leu Ala Glu Leu Tyr Pro Lys
            100                 105                 110

acc acg ctg gac agg atc tat cac cgg gtg aat gat cac tat tgg acc   384
Thr Thr Leu Asp Arg Ile Tyr His Arg Val Asn Asp His Tyr Trp Thr
        115                 120                 125

aag tca ttt gta tat ttg gtt att atc tac att ggt tcg tcg att atg   432
Lys Ser Phe Val Tyr Leu Val Ile Ile Tyr Ile Gly Ser Ser Ile Met
    130                 135                 140
```

```
gtt gtt att gga ccg att att acg tcg att ata gct tac ttc acg cac   480
Val Val Ile Gly Pro Ile Ile Thr Ser Ile Ile Ala Tyr Phe Thr His
145                 150                 155                 160

aac gtt ttc acc tac atg cac tgc tat ccg tac ttt ttg tat gat cct   528
Asn Val Phe Thr Tyr Met His Cys Tyr Pro Tyr Phe Leu Tyr Asp Pro
                165                 170                 175

gag aag gat ccg gtt tgg atc tac atc agc atc tat gct ctg gaa tgg   576
Glu Lys Asp Pro Val Trp Ile Tyr Ile Ser Ile Tyr Ala Leu Glu Trp
            180                 185                 190

ttg cac agc aca cag atg gtc att tcg aac att ggc gcg gat atc tgg   624
Leu His Ser Thr Gln Met Val Ile Ser Asn Ile Gly Ala Asp Ile Trp
        195                 200                 205

ctg ctg tac ttt cag gtg cag ata aat ctc cac ttc agg ggc att ata   672
Leu Leu Tyr Phe Gln Val Gln Ile Asn Leu His Phe Arg Gly Ile Ile
    210                 215                 220

cga tca ctg gcg gat cac aag ccc agt gtg aag cac gac cag gag gac   720
Arg Ser Leu Ala Asp His Lys Pro Ser Val Lys His Asp Gln Glu Asp
225                 230                 235                 240

agg aaa ttc att gcg aaa att gtc gac aag cag gtg cac ctg gtc agt   768
Arg Lys Phe Ile Ala Lys Ile Val Asp Lys Gln Val His Leu Val Ser
                245                 250                 255

ttg caa aac gat ctg aat ggt atc ttt gga aaa tcg ctg ctt cta agc   816
Leu Gln Asn Asp Leu Asn Gly Ile Phe Gly Lys Ser Leu Leu Leu Ser
            260                 265                 270

ctg ctg acc acc gca gcg gtt atc tgc acg gtg gcg gtg tac act ctg   864
Leu Leu Thr Thr Ala Ala Val Ile Cys Thr Val Ala Val Tyr Thr Leu
        275                 280                 285

att cag ggt ccc acc ttg gag ggc ttc acc tat gtg atc ttc atc ggg   912
Ile Gln Gly Pro Thr Leu Glu Gly Phe Thr Tyr Val Ile Phe Ile Gly
    290                 295                 300

act tct gtg atg cag gtc tac ctg gtg tgc tat tac ggt cag caa gtt   960
Thr Ser Val Met Gln Val Tyr Leu Val Cys Tyr Tyr Gly Gln Gln Val
305                 310                 315                 320

ctc gac ttg gtg gag cgc gag gtg gcc cac gcc gtg tac aat cat gat   1008
Leu Asp Leu Val Glu Arg Glu Val Ala His Ala Val Tyr Asn His Asp
                325                 330                 335
```

```
ttt cac gat gct tct ata gcg tac aag agg tac ctg ctc ata atc att   1056
Phe His Asp Ala Ser Ile Ala Tyr Lys Arg Tyr Leu Leu Ile Ile Ile
            340                 345                 350

atc agg gcg cag cag ccc gtg gaa ctt aat gcc atg ggc tac ctg tcc   1104
Ile Arg Ala Gln Gln Pro Val Glu Leu Asn Ala Met Gly Tyr Leu Ser
        355                 360                 365

att tcg ctg gac acc ttt aaa cag ctg atg agc gtc tcc tac cgg gtt   1152
Ile Ser Leu Asp Thr Phe Lys Gln Leu Met Ser Val Ser Tyr Arg Val
    370                 375                 380

ata acc atg ctc atg cag atg att cag                              1179
Ile Thr Met Leu Met Gln Met Ile Gln
385                 390
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<210> 82
<211> 393
<212> PRT
<213> Drosophila melanogaster

<400> 82

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Met Glu Pro Val Gln Tyr Ser Tyr Glu Asp Phe Ala Arg Leu Pro Thr
  1               5                  10                  15

Thr Val Phe Trp Ile Met Gly Tyr Asp Met Leu Gly Val Pro Lys Thr
             20                  25                  30

Arg Ser Arg Arg Ile Leu Tyr Trp Ile Tyr Arg Phe Leu Cys Leu Ala
         35                  40                  45

Ser His Gly Val Cys Val Gly Val Met Val Phe Arg Met Val Glu Ala
     50                  55                  60

Lys Thr Ile Asp Asn Val Ser Leu Ile Met Arg Tyr Ala Thr Leu Val
 65                  70                  75                  80

Thr Tyr Ile Ile Asn Ser Asp Thr Lys Phe Ala Thr Val Leu Gln Arg
                85                  90                  95

Ser Ala Ile Gln Ser Leu Asn Ser Lys Leu Ala Glu Leu Tyr Pro Lys
            100                 105                 110

Thr Thr Leu Asp Arg Ile Tyr His Arg Val Asn Asp His Tyr Trp Thr
        115                 120                 125

Lys Ser Phe Val Tyr Leu Val Ile Ile Tyr Ile Gly Ser Ser Ile Met
```

```
    130                 135                 140

Val Val Ile Gly Pro Ile Ile Thr Ser Ile Ile Ala Tyr Phe Thr His
145                 150                 155                 160

Asn Val Phe Thr Tyr Met His Cys Tyr Pro Tyr Phe Leu Tyr Asp Pro
                165                 170                 175

Glu Lys Asp Pro Val Trp Ile Tyr Ile Ser Ile Tyr Ala Leu Glu Trp
            180                 185                 190

Leu His Ser Thr Gln Met Val Ile Ser Asn Ile Gly Ala Asp Ile Trp
        195                 200                 205

Leu Leu Tyr Phe Gln Val Gln Ile Asn Leu His Phe Arg Gly Ile Ile
    210                 215                 220

Arg Ser Leu Ala Asp His Lys Pro Ser Val Lys His Asp Gln Glu Asp
225                 230                 235                 240

Arg Lys Phe Ile Ala Lys Ile Val Asp Lys Gln Val His Leu Val Ser
                245                 250                 255

Leu Gln Asn Asp Leu Asn Gly Ile Phe Gly Lys Ser Leu Leu Leu Ser
            260                 265                 270

Leu Leu Thr Thr Ala Ala Val Ile Cys Thr Val Ala Val Tyr Thr Leu
        275                 280                 285

Ile Gln Gly Pro Thr Leu Glu Gly Phe Thr Tyr Val Ile Phe Ile Gly
    290                 295                 300

Thr Ser Val Met Gln Val Tyr Leu Val Cys Tyr Tyr Gly Gln Gln Val
305                 310                 315                 320

Leu Asp Leu Val Glu Arg Glu Val Ala His Ala Val Tyr Asn His Asp
                325                 330                 335

Phe His Asp Ala Ser Ile Ala Tyr Lys Arg Tyr Leu Leu Ile Ile Ile
            340                 345                 350

Ile Arg Ala Gln Gln Pro Val Glu Leu Asn Ala Met Gly Tyr Leu Ser
        355                 360                 365

Ile Ser Leu Asp Thr Phe Lys Gln Leu Met Ser Val Ser Tyr Arg Val
    370                 375                 380

Ile Thr Met Leu Met Gln Met Ile Gln
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385 390

<210> 83
<211> 1134
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1134)
<223> DORLU 15.1

<400> 83
atg gac gcc agc tac ttt gcc gtc cag aga aga gct ctg gaa ata gtt 48
Met Asp Ala Ser Tyr Phe Ala Val Gln Arg Arg Ala Leu Glu Ile Val
1 5 10 15

gga ttc gat ccc agt act ccg caa ctg agt ctg aaa cat ccc atc tgg 96
Gly Phe Asp Pro Ser Thr Pro Gln Leu Ser Leu Lys His Pro Ile Trp
20 25 30

gcc ggg att ctc atc ctg tcc ttg atc tct cac aac tgg ccc atg gta 144
Ala Gly Ile Leu Ile Leu Ser Leu Ile Ser His Asn Trp Pro Met Val
35 40 45

gtc tat gcc ctg cag gat ctc tcc gac ttg acc cgt ctg acg gac aac 192
Val Tyr Ala Leu Gln Asp Leu Ser Asp Leu Thr Arg Leu Thr Asp Asn
50 55 60

ttt gcg gtg ttt atg caa gga tca cag agc acc ttc aag ttc ctg gtc 240
Phe Ala Val Phe Met Gln Gly Ser Gln Ser Thr Phe Lys Phe Leu Val
65 70 75 80

atg atg gcg aaa cga agg cgc att gga tcg ttg att cac cgt ttg cat 288
Met Met Ala Lys Arg Arg Arg Ile Gly Ser Leu Ile His Arg Leu His
85 90 95

aag cta aac cag gcg gcc agt gcc acg ccc aat cac ctg gag aag atc 336
Lys Leu Asn Gln Ala Ala Ser Ala Thr Pro Asn His Leu Glu Lys Ile
100 105 110

gag agg gaa aac caa ctg gat agg tat gtc gcc agg tcc ttt aga aat 384
Glu Arg Glu Asn Gln Leu Asp Arg Tyr Val Ala Arg Ser Phe Arg Asn
115 120 125

gcc gcc tac gga gtg att tgt gcc tcg gcc ata gcg ccc atg ttg ctt 432

```
Ala Ala Tyr Gly Val Ile Cys Ala Ser Ala Ile Ala Pro Met Leu Leu
    130                 135                 140

ggc ctg tgg gga tat gtg gag acg ggt gta ttt acc ccg acc aca ccc   480
Gly Leu Trp Gly Tyr Val Glu Thr Gly Val Phe Thr Pro Thr Thr Pro
145                 150                 155                 160

atg gag ttc aac ttc tgg ctg gac gag cga aag cct cac ttt tat tgg   528
Met Glu Phe Asn Phe Trp Leu Asp Glu Arg Lys Pro His Phe Tyr Trp
                165                 170                 175

ccc atc tac gtt tgg ggc gta ctg ggc gtg gca gct gcc gcc tgg ttg   576
Pro Ile Tyr Val Trp Gly Val Leu Gly Val Ala Ala Ala Ala Trp Leu
            180                 185                 190

gcc att gca acg gac acc ctg ttc tcc tgg ctg act cac aat gtg gtg   624
Ala Ile Ala Thr Asp Thr Leu Phe Ser Trp Leu Thr His Asn Val Val
        195                 200                 205

att cag ttc caa cta ctg gag ctt gtt ctc gaa gag aag gat ctg aat   672
Ile Gln Phe Gln Leu Leu Glu Leu Val Leu Glu Glu Lys Asp Leu Asn
    210                 215                 220

ggc gga gac tct cgc ctg acc ggg ttt gtt agt cgt cat cgt ata gct   720
Gly Gly Asp Ser Arg Leu Thr Gly Phe Val Ser Arg His Arg Ile Ala
225                 230                 235                 240

ctg gat ttg gcc aag gaa cta agt tcg att ttc ggg gag atc gtc ttt   768
Leu Asp Leu Ala Lys Glu Leu Ser Ser Ile Phe Gly Glu Ile Val Phe
                245                 250                 255

gtg aaa tac atg ctc agt tac ctg caa ctc tgc atg ttg gcc ttt cgc   816
Val Lys Tyr Met Leu Ser Tyr Leu Gln Leu Cys Met Leu Ala Phe Arg
            260                 265                 270

ttc agc cgc agt ggc tgg agt gcc cag gtg cca ttt aga gcc acc ttc   864
Phe Ser Arg Ser Gly Trp Ser Ala Gln Val Pro Phe Arg Ala Thr Phe
        275                 280                 285

cta gtg gcc atc atc atc caa ctg agt tcg tat tgc tat gga ggc gag   912
Leu Val Ala Ile Ile Ile Gln Leu Ser Ser Tyr Cys Tyr Gly Gly Glu
    290                 295                 300

tat ata aag cag caa agt ttg gcc atc gca caa gcc gtt tat ggt caa   960
Tyr Ile Lys Gln Gln Ser Leu Ala Ile Ala Gln Ala Val Tyr Gly Gln
305                 310                 315                 320

atc aat tgg cca gaa atg acg cca aag aaa aga aga ctc tgg caa atg   1008
```

```
Ile Asn Trp Pro Glu Met Thr Pro Lys Lys Arg Arg Leu Trp Gln Met
                325                 330                 335

gtg atc atg agg gcg cag cga ccg gct aag att ttt gga ttc atg ttc   1056
Val Ile Met Arg Ala Gln Arg Pro Ala Lys Ile Phe Gly Phe Met Phe
            340                 345                 350

gtt gtg gac ttg cca ctg ctg ctt tgg gtc atc aga act gcg ggc tca   1104
Val Val Asp Leu Pro Leu Leu Leu Trp Val Ile Arg Thr Ala Gly Ser
        355                 360                 365

ttt ctg gcc atg ctt agg act ttc gag cgt                           1134
Phe Leu Ala Met Leu Arg Thr Phe Glu Arg
    370                 375


<210> 84
<211> 378
<212> PRT
<213> Drosophila melanogaster

<400> 84
Met Asp Ala Ser Tyr Phe Ala Val Gln Arg Arg Ala Leu Glu Ile Val
  1               5                  10                  15

Gly Phe Asp Pro Ser Thr Pro Gln Leu Ser Leu Lys His Pro Ile Trp
             20                  25                  30

Ala Gly Ile Leu Ile Leu Ser Leu Ile Ser His Asn Trp Pro Met Val
         35                  40                  45

Val Tyr Ala Leu Gln Asp Leu Ser Asp Leu Thr Arg Leu Thr Asp Asn
     50                  55                  60

Phe Ala Val Phe Met Gln Gly Ser Gln Ser Thr Phe Lys Phe Leu Val
 65                  70                  75                  80

Met Met Ala Lys Arg Arg Arg Ile Gly Ser Leu Ile His Arg Leu His
                 85                  90                  95

Lys Leu Asn Gln Ala Ala Ser Ala Thr Pro Asn His Leu Glu Lys Ile
            100                 105                 110

Glu Arg Glu Asn Gln Leu Asp Arg Tyr Val Ala Arg Ser Phe Arg Asn
        115                 120                 125

Ala Ala Tyr Gly Val Ile Cys Ala Ser Ala Ile Ala Pro Met Leu Leu
    130                 135                 140
```

```
Gly Leu Trp Gly Tyr Val Glu Thr Gly Val Phe Thr Pro Thr Thr Pro
145                 150                 155                 160

Met Glu Phe Asn Phe Trp Leu Asp Glu Arg Lys Pro His Phe Tyr Trp
                165                 170                 175

Pro Ile Tyr Val Trp Gly Val Leu Gly Val Ala Ala Ala Ala Trp Leu
            180                 185                 190

Ala Ile Ala Thr Asp Thr Leu Phe Ser Trp Leu Thr His Asn Val Val
        195                 200                 205

Ile Gln Phe Gln Leu Leu Glu Leu Val Leu Glu Glu Lys Asp Leu Asn
    210                 215                 220

Gly Gly Asp Ser Arg Leu Thr Gly Phe Val Ser Arg His Arg Ile Ala
225                 230                 235                 240

Leu Asp Leu Ala Lys Glu Leu Ser Ser Ile Phe Gly Glu Ile Val Phe
                245                 250                 255

Val Lys Tyr Met Leu Ser Tyr Leu Gln Leu Cys Met Leu Ala Phe Arg
            260                 265                 270

Phe Ser Arg Ser Gly Trp Ser Ala Gln Val Pro Phe Arg Ala Thr Phe
        275                 280                 285

Leu Val Ala Ile Ile Ile Gln Leu Ser Ser Tyr Cys Tyr Gly Gly Glu
    290                 295                 300

Tyr Ile Lys Gln Gln Ser Leu Ala Ile Ala Gln Ala Val Tyr Gly Gln
305                 310                 315                 320

Ile Asn Trp Pro Glu Met Thr Pro Lys Lys Arg Arg Leu Trp Gln Met
                325                 330                 335

Val Ile Met Arg Ala Gln Arg Pro Ala Lys Ile Phe Gly Phe Met Phe
            340                 345                 350

Val Val Asp Leu Pro Leu Leu Leu Trp Val Ile Arg Thr Ala Gly Ser
        355                 360                 365

Phe Leu Ala Met Leu Arg Thr Phe Glu Arg
    370                 375
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<210> 85
<211> 1065
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1065)
<223> DORLU 16.1

<400> 85
atg gaa aaa cta cgt tcc tat gag gat ttc atc ttc atg gcc aac atg 48
Met Glu Lys Leu Arg Ser Tyr Glu Asp Phe Ile Phe Met Ala Asn Met
1 5 10 15

atg ttc aag acc ctt ggc tac gat cta ttc cat aca ccc aaa ccc tgg 96
Met Phe Lys Thr Leu Gly Tyr Asp Leu Phe His Thr Pro Lys Pro Trp
20 25 30

tgg cgc tat ctg ctt gtg cga gga tac ttc gtt ttg tgc acg atc agc 144
Trp Arg Tyr Leu Leu Val Arg Gly Tyr Phe Val Leu Cys Thr Ile Ser
35 40 45

aac ttt tac gag gct tcc atg gtg acg aca agg ata att gag tgg gaa 192
Asn Phe Tyr Glu Ala Ser Met Val Thr Thr Arg Ile Ile Glu Trp Glu
50 55 60

tcc ttg gcc gga agt ccc tcc aaa ata atg cga cag ggt ctg cac ttc 240
Ser Leu Ala Gly Ser Pro Ser Lys Ile Met Arg Gln Gly Leu His Phe
65 70 75 80

ttt tac atg ttg agt agc caa ttg aaa ttt atc aca ttc atg ata aat 288
Phe Tyr Met Leu Ser Ser Gln Leu Lys Phe Ile Thr Phe Met Ile Asn
85 90 95

cgc aaa cgc cta ctg cag ctg agc cat cgt ttg aaa gag ttg tat cct 336
Arg Lys Arg Leu Leu Gln Leu Ser His Arg Leu Lys Glu Leu Tyr Pro
100 105 110

cat aaa gag caa aat caa agg aag tac gag gtg aat aaa tac tac cta 384
His Lys Glu Gln Asn Gln Arg Lys Tyr Glu Val Asn Lys Tyr Tyr Leu
115 120 125

tcc tgt tcc acg cgc aat gtt ttg tac gtg tac tac ttt gta atg gtc 432
Ser Cys Ser Thr Arg Asn Val Leu Tyr Val Tyr Tyr Phe Val Met Val
130 135 140

gtc atg gca ctg gaa ccc ctc gtt cag tcg tgc att atc cag ttc ata 480

```
Val Met Ala Leu Glu Pro Leu Val Gln Ser Cys Ile Ile Gln Phe Ile
145                 150                 155                 160

gtg aat gtg agc ctg ggc aca gat ctg tgg atg atg tgc gtc tca agc   528
Val Asn Val Ser Leu Gly Thr Asp Leu Trp Met Met Cys Val Ser Ser
                165                 170                 175

caa ata tcg atg cac ttg ggc tat ctg gcc aat atg ttg gcc tcc att   576
Gln Ile Ser Met His Leu Gly Tyr Leu Ala Asn Met Leu Ala Ser Ile
            180                 185                 190

cga cca agt cca gaa acg gaa caa caa gac tgt gac ttc ttg gcc agc   624
Arg Pro Ser Pro Glu Thr Glu Gln Gln Asp Cys Asp Phe Leu Ala Ser
        195                 200                 205

att ata aag aga cat caa cta atg atc agg ctt caa aag gac gtg aac   672
Ile Ile Lys Arg His Gln Leu Met Ile Arg Leu Gln Lys Asp Val Asn
    210                 215                 220

tat gtt ttt gga ctc tta ttg gca tct aat ctg ttt acc aca tcc tgt   720
Tyr Val Phe Gly Leu Leu Leu Ala Ser Asn Leu Phe Thr Thr Ser Cys
225                 230                 235                 240

tta ctt tgc tgc atg gcg tac tat acc gtc gtc gaa ggt ttc aat tgg   768
Leu Leu Cys Cys Met Ala Tyr Tyr Thr Val Val Glu Gly Phe Asn Trp
                245                 250                 255

gag ggc att tcc tat atg atg ctc ttt gct agt gta gct gcc cag ttc   816
Glu Gly Ile Ser Tyr Met Met Leu Phe Ala Ser Val Ala Ala Gln Phe
            260                 265                 270

tac gtt gtc agc tca cac gga caa atg tta ata gat ttg agt aca aat   864
Tyr Val Val Ser Ser His Gly Gln Met Leu Ile Asp Leu Ser Thr Asn
        275                 280                 285

tta gcc aag gct gcc ttt gaa agc aag tgg tat gaa gga tct ttg cga   912
Leu Ala Lys Ala Ala Phe Glu Ser Lys Trp Tyr Glu Gly Ser Leu Arg
    290                 295                 300

tac aaa aag gag ata ctc att cta atg gca cag gct caa cga cct ttg   960
Tyr Lys Lys Glu Ile Leu Ile Leu Met Ala Gln Ala Gln Arg Pro Leu
305                 310                 315                 320

gag att tca gcc agg gga gta att atc ata tcc ctc gac acc ttt aaa  1008
Glu Ile Ser Ala Arg Gly Val Ile Ile Ile Ser Leu Asp Thr Phe Lys
                325                 330                 335

ata ttg atg acc atc aca tac aga ttt ttc gcg gtt ata cga caa act  1056
```

```
Ile Leu Met Thr Ile Thr Tyr Arg Phe Phe Ala Val Ile Arg Gln Thr
            340                 345                 350

gta gaa aag                                                     1065
Val Glu Lys
        355
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<210> 86
<211> 355
<212> PRT
<213> Drosophila melanogaster

<400> 86

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Met Glu Lys Leu Arg Ser Tyr Glu Asp Phe Ile Phe Met Ala Asn Met
  1               5                  10                  15

Met Phe Lys Thr Leu Gly Tyr Asp Leu Phe His Thr Pro Lys Pro Trp
             20                  25                  30

Trp Arg Tyr Leu Leu Val Arg Gly Tyr Phe Val Leu Cys Thr Ile Ser
         35                  40                  45

Asn Phe Tyr Glu Ala Ser Met Val Thr Thr Arg Ile Ile Glu Trp Glu
     50                  55                  60

Ser Leu Ala Gly Ser Pro Ser Lys Ile Met Arg Gln Gly Leu His Phe
 65                  70                  75                  80

Phe Tyr Met Leu Ser Ser Gln Leu Lys Phe Ile Thr Phe Met Ile Asn
                 85                  90                  95

Arg Lys Arg Leu Leu Gln Leu Ser His Arg Leu Lys Glu Leu Tyr Pro
            100                 105                 110

His Lys Glu Gln Asn Gln Arg Lys Tyr Glu Val Asn Lys Tyr Tyr Leu
        115                 120                 125

Ser Cys Ser Thr Arg Asn Val Leu Tyr Val Tyr Tyr Phe Val Met Val
    130                 135                 140

Val Met Ala Leu Glu Pro Leu Val Gln Ser Cys Ile Ile Gln Phe Ile
145                 150                 155                 160

Val Asn Val Ser Leu Gly Thr Asp Leu Trp Met Met Cys Val Ser Ser
                165                 170                 175

Gln Ile Ser Met His Leu Gly Tyr Leu Ala Asn Met Leu Ala Ser Ile
```

```
            180                 185                 190

Arg Pro Ser Pro Glu Thr Glu Gln Gln Asp Cys Asp Phe Leu Ala Ser
        195                 200                 205

Ile Ile Lys Arg His Gln Leu Met Ile Arg Leu Gln Lys Asp Val Asn
    210                 215                 220

Tyr Val Phe Gly Leu Leu Leu Ala Ser Asn Leu Phe Thr Thr Ser Cys
225                 230                 235                 240

Leu Leu Cys Cys Met Ala Tyr Tyr Thr Val Val Glu Gly Phe Asn Trp
                245                 250                 255

Glu Gly Ile Ser Tyr Met Met Leu Phe Ala Ser Val Ala Ala Gln Phe
            260                 265                 270

Tyr Val Val Ser Ser His Gly Gln Met Leu Ile Asp Leu Ser Thr Asn
        275                 280                 285

Leu Ala Lys Ala Ala Phe Glu Ser Lys Trp Tyr Glu Gly Ser Leu Arg
    290                 295                 300

Tyr Lys Lys Glu Ile Leu Ile Leu Met Ala Gln Ala Gln Arg Pro Leu
305                 310                 315                 320

Glu Ile Ser Ala Arg Gly Val Ile Ile Ile Ser Leu Asp Thr Phe Lys
                325                 330                 335

Ile Leu Met Thr Ile Thr Tyr Arg Phe Phe Ala Val Ile Arg Gln Thr
            340                 345                 350

Val Glu Lys
        355
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<210> 87
<211> 1272
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1272)
<223> DORLU 22.1

<400> 87

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Met Leu Thr Asp Lys Phe Leu Arg Leu Gln Ser Ala Leu Phe Arg Leu
  1               5                  10                  15

ctc gga ctc gaa ttg ttg cac gag cag gat gtt ggc cat cga tat cct   96
Leu Gly Leu Glu Leu Leu His Glu Gln Asp Val Gly His Arg Tyr Pro
             20                  25                  30

tgg cgc agc atc tgc tgc att ctc tcg gtg gcc agt ttc atg ccc ctg   144
Trp Arg Ser Ile Cys Cys Ile Leu Ser Val Ala Ser Phe Met Pro Leu
         35                  40                  45

acc att gcg ttt ggc ctg caa aac gtc caa aat gtg gag caa tta acc   192
Thr Ile Ala Phe Gly Leu Gln Asn Val Gln Asn Val Glu Gln Leu Thr
     50                  55                  60

gac tca ctc tgc tcg gtt ctc gtg gat ttg ctg gcc ctg tgc aaa atc   240
Asp Ser Leu Cys Ser Val Leu Val Asp Leu Leu Ala Leu Cys Lys Ile
 65                  70                  75                  80

ggg ctt ttc ctt tgg ctt tac aag gac ttc aag ttc cta ata ggg cag   288
Gly Leu Phe Leu Trp Leu Tyr Lys Asp Phe Lys Phe Leu Ile Gly Gln
                 85                  90                  95

ttc tat tgt gtt ttg caa acg gaa acc cac acc gct gtc gct gaa atg   336
Phe Tyr Cys Val Leu Gln Thr Glu Thr His Thr Ala Val Ala Glu Met
            100                 105                 110

ata gtg acc agg gaa agt cgt cgg gat cag ttc atc agt gct atg tat   384
Ile Val Thr Arg Glu Ser Arg Arg Asp Gln Phe Ile Ser Ala Met Tyr
        115                 120                 125

gcc tac tgt ttc att acg gct ggc ctt tcg gcc tgc ctg atg tcc cct   432
Ala Tyr Cys Phe Ile Thr Ala Gly Leu Ser Ala Cys Leu Met Ser Pro
    130                 135                 140

cta tcc atg ctg att agc tac cac gaa cag gtg aat tgc agc cga aat   480
Leu Ser Met Leu Ile Ser Tyr His Glu Gln Val Asn Cys Ser Arg Asn
145                 150                 155                 160

ttc cat ttc cca gtg tgt aag aaa aag tac tgc tta ata tcc aga ata   528
Phe His Phe Pro Val Cys Lys Lys Lys Tyr Cys Leu Ile Ser Arg Ile
                165                 170                 175

tta aga tac agt ttc tgc aga tat ccc tgg gac aat atg aag ctg tcc   576
Leu Arg Tyr Ser Phe Cys Arg Tyr Pro Trp Asp Asn Met Lys Leu Ser
            180                 185                 190
```

```
aac tac atc att tcc tat ttc tgg aat gtg tgt gct gca ttg ggc gtg   624
Asn Tyr Ile Ile Ser Tyr Phe Trp Asn Val Cys Ala Ala Leu Gly Val
        195                 200                 205

gca ctg ccc acc gtt tgt gtg gac aca ctg ttc tgt tct ctg agc cat   672
Ala Leu Pro Thr Val Cys Val Asp Thr Leu Phe Cys Ser Leu Ser His
    210                 215                 220

aat ctc tgt gcc cta ttc cag att gcc agg cac aaa atg atg cac ttt   720
Asn Leu Cys Ala Leu Phe Gln Ile Ala Arg His Lys Met Met His Phe
225                 230                 235                 240

gag ggc aga aat acc aaa gag act cat gag aac tta aag cac gtg ttt   768
Glu Gly Arg Asn Thr Lys Glu Thr His Glu Asn Leu Lys His Val Phe
                245                 250                 255

caa cta tat gcg ttg tgt ttg aac ctg ggc cat ttc tta aac gaa tat   816
Gln Leu Tyr Ala Leu Cys Leu Asn Leu Gly His Phe Leu Asn Glu Tyr
            260                 265                 270

ttc aga ccg ctc atc tgc cag ttt gtg gca gcc tca ctg cac ttg tgt   864
Phe Arg Pro Leu Ile Cys Gln Phe Val Ala Ala Ser Leu His Leu Cys
        275                 280                 285

gtc ctg tgc tac caa ctg tct gcc aat atc ctg cag cca gcg tta ctc   912
Val Leu Cys Tyr Gln Leu Ser Ala Asn Ile Leu Gln Pro Ala Leu Leu
    290                 295                 300

ttc tat gcc gca ttt acg gca gca gtt gtt ggc cag gtg tct ata tac   960
Phe Tyr Ala Ala Phe Thr Ala Ala Val Val Gly Gln Val Ser Ile Tyr
305                 310                 315                 320

tgc ttc tgc gga tcg agc atc cat tcg gag tgt cag cta ttt ggc cag   1008
Cys Phe Cys Gly Ser Ser Ile His Ser Glu Cys Gln Leu Phe Gly Gln
                325                 330                 335

gcc atc tac gag tcc agc tgg ccc cat ctg ctg cag gaa aac ctg cag   1056
Ala Ile Tyr Glu Ser Ser Trp Pro His Leu Leu Gln Glu Asn Leu Gln
            340                 345                 350

ctt gta agc tcc tta aaa att gcc atg atg cga tcg agt ttg gga tgt   1104
Leu Val Ser Ser Leu Lys Ile Ala Met Met Arg Ser Ser Leu Gly Cys
        355                 360                 365

ccc atc gat ggt tac ttc ttc gag gcc aat cgg gag acg ctc atc acg   1152
Pro Ile Asp Gly Tyr Phe Phe Glu Ala Asn Arg Glu Thr Leu Ile Thr
    370                 375                 380
```

```
atc cct ggc cta gct ttc cgg gct ttc att att cag tgg ttc agt cgt   1200
Ile Pro Gly Leu Ala Phe Arg Ala Phe Ile Ile Gln Trp Phe Ser Arg
385                 390                 395                 400

tcg ggt ttg ttt aac tcc gga aat att tac aat tat gct tta agc cgg   1248
Ser Gly Leu Phe Asn Ser Gly Asn Ile Tyr Asn Tyr Ala Leu Ser Arg
                405                 410                 415

tgt tgt tac agc cag ttg gct aat                                   1272
Cys Cys Tyr Ser Gln Leu Ala Asn
            420
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<210> 88
<211> 424
<212> PRT
<213> Drosophila melanogaster

<400> 88

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Met Leu Thr Asp Lys Phe Leu Arg Leu Gln Ser Ala Leu Phe Arg Leu
  1               5                  10                  15

Leu Gly Leu Glu Leu Leu His Glu Gln Asp Val Gly His Arg Tyr Pro
             20                  25                  30

Trp Arg Ser Ile Cys Cys Ile Leu Ser Val Ala Ser Phe Met Pro Leu
         35                  40                  45

Thr Ile Ala Phe Gly Leu Gln Asn Val Gln Asn Val Glu Gln Leu Thr
     50                  55                  60

Asp Ser Leu Cys Ser Val Leu Val Asp Leu Leu Ala Leu Cys Lys Ile
 65                  70                  75                  80

Gly Leu Phe Leu Trp Leu Tyr Lys Asp Phe Lys Phe Leu Ile Gly Gln
                 85                  90                  95

Phe Tyr Cys Val Leu Gln Thr Glu Thr His Thr Ala Val Ala Glu Met
            100                 105                 110

Ile Val Thr Arg Glu Ser Arg Arg Asp Gln Phe Ile Ser Ala Met Tyr
        115                 120                 125

Ala Tyr Cys Phe Ile Thr Ala Gly Leu Ser Ala Cys Leu Met Ser Pro
    130                 135                 140

Leu Ser Met Leu Ile Ser Tyr His Glu Gln Val Asn Cys Ser Arg Asn
145                 150                 155                 160
```

Phe His Phe Pro Val Cys Lys Lys Lys Tyr Cys Leu Ile Ser Arg Ile
165 170 175

Leu Arg Tyr Ser Phe Cys Arg Tyr Pro Trp Asp Asn Met Lys Leu Ser
180 185 190

Asn Tyr Ile Ile Ser Tyr Phe Trp Asn Val Cys Ala Ala Leu Gly Val
195 200 205

Ala Leu Pro Thr Val Cys Val Asp Thr Leu Phe Cys Ser Leu Ser His
210 215 220

Asn Leu Cys Ala Leu Phe Gln Ile Ala Arg His Lys Met Met His Phe
225 230 235 240

Glu Gly Arg Asn Thr Lys Glu Thr His Glu Asn Leu Lys His Val Phe
245 250 255

Gln Leu Tyr Ala Leu Cys Leu Asn Leu Gly His Phe Leu Asn Glu Tyr
260 265 270

Phe Arg Pro Leu Ile Cys Gln Phe Val Ala Ala Ser Leu His Leu Cys
275 280 285

Val Leu Cys Tyr Gln Leu Ser Ala Asn Ile Leu Gln Pro Ala Leu Leu
290 295 300

Phe Tyr Ala Ala Phe Thr Ala Ala Val Val Gly Gln Val Ser Ile Tyr
305 310 315 320

Cys Phe Cys Gly Ser Ser Ile His Ser Glu Cys Gln Leu Phe Gly Gln
325 330 335

Ala Ile Tyr Glu Ser Ser Trp Pro His Leu Leu Gln Glu Asn Leu Gln
340 345 350

Leu Val Ser Ser Leu Lys Ile Ala Met Met Arg Ser Ser Leu Gly Cys
355 360 365

Pro Ile Asp Gly Tyr Phe Phe Glu Ala Asn Arg Glu Thr Leu Ile Thr
370 375 380

Ile Pro Gly Leu Ala Phe Arg Ala Phe Ile Ile Gln Trp Phe Ser Arg
385 390 395 400

Ser Gly Leu Phe Asn Ser Gly Asn Ile Tyr Asn Tyr Ala Leu Ser Arg
405 410 415

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Cys Cys Tyr Ser Gln Leu Ala Asn
            420



<210> 89
<211> 1176
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1176)
<223> DORLU 24.1

<400> 89
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Met Ser Lys Leu Ile Glu Val Phe Leu Gly Asn Leu Trp Thr Gln Arg
  1               5                  10                  15

ttt acc ttc gcc cga atg ggt ttg gat ttg cag ccc gat aaa aag ggc   96
Phe Thr Phe Ala Arg Met Gly Leu Asp Leu Gln Pro Asp Lys Lys Gly
             20                  25                  30

aat gtt ttg cga tct ccg ctt ctt tat tgt att atg tgt ctg aca aca   144
Asn Val Leu Arg Ser Pro Leu Leu Tyr Cys Ile Met Cys Leu Thr Thr
         35                  40                  45

agc ttt gag ctc tgc acc gtg tgc gcc ttt atg gtc caa aat cgc aac   192
Ser Phe Glu Leu Cys Thr Val Cys Ala Phe Met Val Gln Asn Arg Asn
     50                  55                  60

caa atc gtg ctt tgt tcc gag gcc ctg atg cac gga cta cag atg gtc   240
Gln Ile Val Leu Cys Ser Glu Ala Leu Met His Gly Leu Gln Met Val
 65                  70                  75                  80

tcc tcg cta ctg aag atg gct ata ttc ttg gcc aaa tct cac gac ctg   288
Ser Ser Leu Leu Lys Met Ala Ile Phe Leu Ala Lys Ser His Asp Leu
             85                  90                  95

gtg gac cta att caa cag att cag tcg cct ttt aca gag gag gat ctt   336
Val Asp Leu Ile Gln Gln Ile Gln Ser Pro Phe Thr Glu Glu Asp Leu
         100                 105                 110

gta ggt aca gag tgg aga tcc caa aat caa agg gga caa cta atg gct   384
Val Gly Thr Glu Trp Arg Ser Gln Asn Gln Arg Gly Gln Leu Met Ala
        115                 120                 125
```

```
gcc att tac ttt atg atg tgt gcc ggt acg agt gtg tca ttt ctg ttg   432
Ala Ile Tyr Phe Met Met Cys Ala Gly Thr Ser Val Ser Phe Leu Leu
    130                 135                 140

atg cca gtg gct ttg acc atg ctt aag tac cat tcc act ggg gaa ttc   480
Met Pro Val Ala Leu Thr Met Leu Lys Tyr His Ser Thr Gly Glu Phe
145                 150                 155                 160

gcg cct gtc agc tcg ttc cgg gtt ctg ctt cca tac gat gtg aca caa   528
Ala Pro Val Ser Ser Phe Arg Val Leu Leu Pro Tyr Asp Val Thr Gln
                165                 170                 175

ccg cat gtt tat gcc atg gac tgc tgc ttg atg gta ttt gtg tta agt   576
Pro His Val Tyr Ala Met Asp Cys Cys Leu Met Val Phe Val Leu Ser
            180                 185                 190

ttt ttt tgc tgc tcc acc acc gga gtg gat acc tta tat gga tgg tgt   624
Phe Phe Cys Cys Ser Thr Thr Gly Val Asp Thr Leu Tyr Gly Trp Cys
        195                 200                 205

gct tta ggc gtg agt tta caa tac cgt cgc ctc ggt caa caa ctt aaa   672
Ala Leu Gly Val Ser Leu Gln Tyr Arg Arg Leu Gly Gln Gln Leu Lys
    210                 215                 220

agg ata ccc tcc tgt ttc aat cca tct cgg tct gac ttt gga tta agt   720
Arg Ile Pro Ser Cys Phe Asn Pro Ser Arg Ser Asp Phe Gly Leu Ser
225                 230                 235                 240

ggg att ttt gtg gag cat gct cgt ctg ctt aaa ata gtc caa cat ttt   768
Gly Ile Phe Val Glu His Ala Arg Leu Leu Lys Ile Val Gln His Phe
                245                 250                 255

aat tat agt ttt atg gag atc gca ttt gtg gag gtt gtt ata atc tgt   816
Asn Tyr Ser Phe Met Glu Ile Ala Phe Val Glu Val Val Ile Ile Cys
            260                 265                 270

gga ctc tat tgc tca gta att tgt cag tat ata atg cca cac acc aac   864
Gly Leu Tyr Cys Ser Val Ile Cys Gln Tyr Ile Met Pro His Thr Asn
        275                 280                 285

caa aac ttc gcc ttt ctg ggt ttc ttt tca ttg gta gtt acc aca cag   912
Gln Asn Phe Ala Phe Leu Gly Phe Phe Ser Leu Val Val Thr Thr Gln
    290                 295                 300

ctg tgc atc tat ctt ttc ggt gcc gaa cag gtc cgt ttg gag gct gag   960
Leu Cys Ile Tyr Leu Phe Gly Ala Glu Gln Val Arg Leu Glu Ala Glu
305                 310                 315                 320
```

```
cga ttt tcc cgg ctg cta tac gaa gta att cct tgg caa aac ctt cct   1008
Arg Phe Ser Arg Leu Leu Tyr Glu Val Ile Pro Trp Gln Asn Leu Pro
                325                 330                 335

cct aaa cac cgg aaa ctt ttc ctt ttt cca att gag cgc gcc caa cga   1056
Pro Lys His Arg Lys Leu Phe Leu Phe Pro Ile Glu Arg Ala Gln Arg
            340                 345                 350

gaa act gtt ctc ggt gct tat ttc ttc gaa cta ggc aga cct ctt ctt   1104
Glu Thr Val Leu Gly Ala Tyr Phe Phe Glu Leu Gly Arg Pro Leu Leu
        355                 360                 365

gtt tgg ata ttt cgc aca gca ggc tct ttt aca act ttg atg aac gct   1152
Val Trp Ile Phe Arg Thr Ala Gly Ser Phe Thr Thr Leu Met Asn Ala
    370                 375                 380

ctc tac gca aaa tac gaa acg cat                                  1176
Leu Tyr Ala Lys Tyr Glu Thr His
385                 390
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<210> 90
<211> 392
<212> PRT
<213> Drosophila melanogaster

<400> 90

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Met Ser Lys Leu Ile Glu Val Phe Leu Gly Asn Leu Trp Thr Gln Arg
  1               5                  10                  15

Phe Thr Phe Ala Arg Met Gly Leu Asp Leu Gln Pro Asp Lys Lys Gly
             20                  25                  30

Asn Val Leu Arg Ser Pro Leu Leu Tyr Cys Ile Met Cys Leu Thr Thr
         35                  40                  45

Ser Phe Glu Leu Cys Thr Val Cys Ala Phe Met Val Gln Asn Arg Asn
     50                  55                  60

Gln Ile Val Leu Cys Ser Glu Ala Leu Met His Gly Leu Gln Met Val
 65                  70                  75                  80

Ser Ser Leu Leu Lys Met Ala Ile Phe Leu Ala Lys Ser His Asp Leu
                 85                  90                  95

Val Asp Leu Ile Gln Gln Ile Gln Ser Pro Phe Thr Glu Glu Asp Leu
            100                 105                 110
```

```
Val Gly Thr Glu Trp Arg Ser Gln Asn Gln Arg Gly Gln Leu Met Ala
        115                 120                 125

Ala Ile Tyr Phe Met Met Cys Ala Gly Thr Ser Val Ser Phe Leu Leu
    130                 135                 140

Met Pro Val Ala Leu Thr Met Leu Lys Tyr His Ser Thr Gly Glu Phe
145                 150                 155                 160

Ala Pro Val Ser Ser Phe Arg Val Leu Leu Pro Tyr Asp Val Thr Gln
                165                 170                 175

Pro His Val Tyr Ala Met Asp Cys Cys Leu Met Val Phe Val Leu Ser
            180                 185                 190

Phe Phe Cys Cys Ser Thr Thr Gly Val Asp Thr Leu Tyr Gly Trp Cys
        195                 200                 205

Ala Leu Gly Val Ser Leu Gln Tyr Arg Arg Leu Gly Gln Gln Leu Lys
    210                 215                 220

Arg Ile Pro Ser Cys Phe Asn Pro Ser Arg Ser Asp Phe Gly Leu Ser
225                 230                 235                 240

Gly Ile Phe Val Glu His Ala Arg Leu Leu Lys Ile Val Gln His Phe
                245                 250                 255

Asn Tyr Ser Phe Met Glu Ile Ala Phe Val Glu Val Val Ile Ile Cys
            260                 265                 270

Gly Leu Tyr Cys Ser Val Ile Cys Gln Tyr Ile Met Pro His Thr Asn
        275                 280                 285

Gln Asn Phe Ala Phe Leu Gly Phe Phe Ser Leu Val Val Thr Thr Gln
    290                 295                 300

Leu Cys Ile Tyr Leu Phe Gly Ala Glu Gln Val Arg Leu Glu Ala Glu
305                 310                 315                 320

Arg Phe Ser Arg Leu Leu Tyr Glu Val Ile Pro Trp Gln Asn Leu Pro
                325                 330                 335

Pro Lys His Arg Lys Leu Phe Leu Phe Pro Ile Glu Arg Ala Gln Arg
            340                 345                 350

Glu Thr Val Leu Gly Ala Tyr Phe Phe Glu Leu Gly Arg Pro Leu Leu
        355                 360                 365
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```
Val Trp Ile Phe Arg Thr Ala Gly Ser Phe Thr Thr Leu Met Asn Ala
    370                 375                 380

Leu Tyr Ala Lys Tyr Glu Thr His
385                 390
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<210> 91
<211> 1359
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1359)
<223> DORLU 25.1

<400> 91

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atg aag agc aca ttc aag gaa gaa agg att aag gac gac tcc aag cgt   48
Met Lys Ser Thr Phe Lys Glu Glu Arg Ile Lys Asp Asp Ser Lys Arg
  1               5                  10                  15

cgc gac ctg ttt gta ttc gtg agg caa acc atg tgt ata gcg gcc atg   96
Arg Asp Leu Phe Val Phe Val Arg Gln Thr Met Cys Ile Ala Ala Met
             20                  25                  30

tat ccc ttc ggt tac tac gtg aat gga tct gga gtc ctg gcc gtt ctg   144
Tyr Pro Phe Gly Tyr Tyr Val Asn Gly Ser Gly Val Leu Ala Val Leu
         35                  40                  45

gtg cga ttc tgt gac ttg acc tac gag ctc ttt aac tac ttc gtt tcg   192
Val Arg Phe Cys Asp Leu Thr Tyr Glu Leu Phe Asn Tyr Phe Val Ser
     50                  55                  60

gta cac ata gct ggc ctg tac atc tgc acc atc tac atc aac tat ggg   240
Val His Ile Ala Gly Leu Tyr Ile Cys Thr Ile Tyr Ile Asn Tyr Gly
 65                  70                  75                  80

caa ggc gat ttg gac ttc ttc gtg aac tgt ttg ata caa acc att att   288
Gln Gly Asp Leu Asp Phe Phe Val Asn Cys Leu Ile Gln Thr Ile Ile
                 85                  90                  95

tat ctg tgg aca ata gcg atg aaa ctc tac ttt cgg agg ttc aga cct   336
Tyr Leu Trp Thr Ile Ala Met Lys Leu Tyr Phe Arg Arg Phe Arg Pro
            100                 105                 110
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ggt ttg ttg aat acc att ctg tcc aac atc aat gat gag tac gag aca   384
Gly Leu Leu Asn Thr Ile Leu Ser Asn Ile Asn Asp Glu Tyr Glu Thr
        115                 120                 125

cgt tcg gct gtg gga ttc agt ttc gtc aca atg gcg gga tcc tat cgg   432
Arg Ser Ala Val Gly Phe Ser Phe Val Thr Met Ala Gly Ser Tyr Arg
    130                 135                 140

atg tcc aag cta tgg atc aaa acc tat gtg tat tgc tgc tac ata ggc   480
Met Ser Lys Leu Trp Ile Lys Thr Tyr Val Tyr Cys Cys Tyr Ile Gly
145                 150                 155                 160

acc att ttc tgg ctg gct ctt ccc att gcc tac cgg gat agg agt ctt   528
Thr Ile Phe Trp Leu Ala Leu Pro Ile Ala Tyr Arg Asp Arg Ser Leu
                165                 170                 175

cct ctt gcc tgc tgg tat ccc ttt gac tat aca caa ccc ggt gtc tat   576
Pro Leu Ala Cys Trp Tyr Pro Phe Asp Tyr Thr Gln Pro Gly Val Tyr
            180                 185                 190

gag gta gtg ttc ctt ctc cag gcg atg gga cag atc caa gtg gcc gca   624
Glu Val Val Phe Leu Leu Gln Ala Met Gly Gln Ile Gln Val Ala Ala
        195                 200                 205

tcc ttt gcc tcc tcc agt ggc ctg cat atg gtg ctt tgt gtg ctg ata   672
Ser Phe Ala Ser Ser Ser Gly Leu His Met Val Leu Cys Val Leu Ile
    210                 215                 220

tca ggg cag tac gat gtc ctc ttt tgc agt ctc aag aat gta tta gcc   720
Ser Gly Gln Tyr Asp Val Leu Phe Cys Ser Leu Lys Asn Val Leu Ala
225                 230                 235                 240

agc agc tat gtc ctt atg gga gcc aat atg acg gaa ctg aat caa ttg   768
Ser Ser Tyr Val Leu Met Gly Ala Asn Met Thr Glu Leu Asn Gln Leu
                245                 250                 255

cag gct gag caa tct gcg gcc gat gtc gag cca ggt cag tat gct tac   816
Gln Ala Glu Gln Ser Ala Ala Asp Val Glu Pro Gly Gln Tyr Ala Tyr
            260                 265                 270

tcc gtg gag gag gag aca cct ttg caa gaa ctt cta aaa gtt ggg agc   864
Ser Val Glu Glu Glu Thr Pro Leu Gln Glu Leu Leu Lys Val Gly Ser
        275                 280                 285

tca atg gac ttc tcc tcc gca ttc agg ctg tct ttt gtg cgg tgc att   912
Ser Met Asp Phe Ser Ser Ala Phe Arg Leu Ser Phe Val Arg Cys Ile
    290                 295                 300
```

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cag cac cat cga tac ata gtg gcg gca ctg aag aaa att gag agt ttc   960
Gln His His Arg Tyr Ile Val Ala Ala Leu Lys Lys Ile Glu Ser Phe
305                 310                 315                 320

tac agt ccc ata tgg ttc gtg aag att ggc gaa gtc acc ttt ctt atg   1008
Tyr Ser Pro Ile Trp Phe Val Lys Ile Gly Glu Val Thr Phe Leu Met
                325                 330                 335

tgc ctg gta gcc ttc gtc tcc acg aag agc acc gcg gcc aac tca ttc   1056
Cys Leu Val Ala Phe Val Ser Thr Lys Ser Thr Ala Ala Asn Ser Phe
            340                 345                 350

atg cga atg gtc tcc ttg ggc cag tac ctg ctc tta gtt ctc tac gag   1104
Met Arg Met Val Ser Leu Gly Gln Tyr Leu Leu Leu Val Leu Tyr Glu
        355                 360                 365

ctg ttc atc atc tgc tac ttc gcg gac atc gtt ttt cag aac agc cag   1152
Leu Phe Ile Ile Cys Tyr Phe Ala Asp Ile Val Phe Gln Asn Ser Gln
    370                 375                 380

cgg tgc ggt gaa gcc ctc tgg cga agt cct tgg cag cga cat ttg aag   1200
Arg Cys Gly Glu Ala Leu Trp Arg Ser Pro Trp Gln Arg His Leu Lys
385                 390                 395                 400

gat gtt cgc agt gat tac atg ttc ttt atg ctg aat tcc cgc agg cag   1248
Asp Val Arg Ser Asp Tyr Met Phe Phe Met Leu Asn Ser Arg Arg Gln
                405                 410                 415

ttc caa ctt acg gcc gga aaa ata agc aat cta aac gtg gat cgt ttc   1296
Phe Gln Leu Thr Ala Gly Lys Ile Ser Asn Leu Asn Val Asp Arg Phe
            420                 425                 430

aga ggg act att act act gcc ttc tcg ttt ctc acc ttg ctg caa aag   1344
Arg Gly Thr Ile Thr Thr Ala Phe Ser Phe Leu Thr Leu Leu Gln Lys
        435                 440                 445

atg gat gca cga gaa                                              1359
Met Asp Ala Arg Glu
    450
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<210> 92
<211> 453
<212> PRT
<213> Drosophila melanogaster

<400> 92
Met Lys Ser Thr Phe Lys Glu Glu Arg Ile Lys Asp Asp Ser Lys Arg

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Arg Asp Leu Phe Val Phe Val Arg Gln Thr Met Cys Ile Ala Ala Met
             20                  25                  30

Tyr Pro Phe Gly Tyr Tyr Val Asn Gly Ser Gly Val Leu Ala Val Leu
         35                  40                  45

Val Arg Phe Cys Asp Leu Thr Tyr Glu Leu Phe Asn Tyr Phe Val Ser
     50                  55                  60

Val His Ile Ala Gly Leu Tyr Ile Cys Thr Ile Tyr Ile Asn Tyr Gly
 65                  70                  75                  80

Gln Gly Asp Leu Asp Phe Phe Val Asn Cys Leu Ile Gln Thr Ile Ile
                 85                  90                  95

Tyr Leu Trp Thr Ile Ala Met Lys Leu Tyr Phe Arg Arg Phe Arg Pro
            100                 105                 110

Gly Leu Leu Asn Thr Ile Leu Ser Asn Ile Asn Asp Glu Tyr Glu Thr
        115                 120                 125

Arg Ser Ala Val Gly Phe Ser Phe Val Thr Met Ala Gly Ser Tyr Arg
    130                 135                 140

Met Ser Lys Leu Trp Ile Lys Thr Tyr Val Tyr Cys Cys Tyr Ile Gly
145                 150                 155                 160

Thr Ile Phe Trp Leu Ala Leu Pro Ile Ala Tyr Arg Asp Arg Ser Leu
                165                 170                 175

Pro Leu Ala Cys Trp Tyr Pro Phe Asp Tyr Thr Gln Pro Gly Val Tyr
            180                 185                 190

Glu Val Val Phe Leu Leu Gln Ala Met Gly Gln Ile Gln Val Ala Ala
        195                 200                 205

Ser Phe Ala Ser Ser Ser Gly Leu His Met Val Leu Cys Val Leu Ile
    210                 215                 220

Ser Gly Gln Tyr Asp Val Leu Phe Cys Ser Leu Lys Asn Val Leu Ala
225                 230                 235                 240

Ser Ser Tyr Val Leu Met Gly Ala Asn Met Thr Glu Leu Asn Gln Leu
                245                 250                 255

Gln Ala Glu Gln Ser Ala Ala Asp Val Glu Pro Gly Gln Tyr Ala Tyr
```

260 265 270

Ser Val Glu Glu Glu Thr Pro Leu Gln Glu Leu Leu Lys Val Gly Ser
275 280 285

Ser Met Asp Phe Ser Ser Ala Phe Arg Leu Ser Phe Val Arg Cys Ile
290 295 300

Gln His His Arg Tyr Ile Val Ala Ala Leu Lys Lys Ile Glu Ser Phe
305 310 315 320

Tyr Ser Pro Ile Trp Phe Val Lys Ile Gly Glu Val Thr Phe Leu Met
325 330 335

Cys Leu Val Ala Phe Val Ser Thr Lys Ser Thr Ala Ala Asn Ser Phe
340 345 350

Met Arg Met Val Ser Leu Gly Gln Tyr Leu Leu Leu Val Leu Tyr Glu
355 360 365

Leu Phe Ile Ile Cys Tyr Phe Ala Asp Ile Val Phe Gln Asn Ser Gln
370 375 380

Arg Cys Gly Glu Ala Leu Trp Arg Ser Pro Trp Gln Arg His Leu Lys
385 390 395 400

Asp Val Arg Ser Asp Tyr Met Phe Phe Met Leu Asn Ser Arg Arg Gln
405 410 415

Phe Gln Leu Thr Ala Gly Lys Ile Ser Asn Leu Asn Val Asp Arg Phe
420 425 430

Arg Gly Thr Ile Thr Thr Ala Phe Ser Phe Leu Thr Leu Leu Gln Lys
435 440 445

Met Asp Ala Arg Glu
450

<210> 93
<211> 1296
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1296)

<223> DORLU 26.1

<400> 93

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atg aaa gtg ggt ttt gca act att ggc tat ata aag agt att cct tgc   48
Met Lys Val Gly Phe Ala Thr Ile Gly Tyr Ile Lys Ser Ile Pro Cys
  1               5                  10                  15

cag gat gtc gtt cac ata gtt ata tcc atc atg tcc gag tgg tta cgc   96
Gln Asp Val Val His Ile Val Ile Ser Ile Met Ser Glu Trp Leu Arg
             20                  25                  30

ttt ctg aaa cgc gat caa cag ctg gat gtg tac ttt ttt gca gtg ccc   144
Phe Leu Lys Arg Asp Gln Gln Leu Asp Val Tyr Phe Phe Ala Val Pro
         35                  40                  45

cgc ttg agt tta gac ata atg ggc tat tgg ccg ggc aaa act ggt gat   192
Arg Leu Ser Leu Asp Ile Met Gly Tyr Trp Pro Gly Lys Thr Gly Asp
     50                  55                  60

aca tgg ccc tgg aga tcc ctg att cac ttc gca atc ctg gcc att ggc   240
Thr Trp Pro Trp Arg Ser Leu Ile His Phe Ala Ile Leu Ala Ile Gly
 65                  70                  75                  80

gtg gcc acc gaa ctg cat gct ggc atg tgt ttt cta gac cga cag cag   288
Val Ala Thr Glu Leu His Ala Gly Met Cys Phe Leu Asp Arg Gln Gln
                 85                  90                  95

att acc ttg gca ctg gag acc ctc tgt cca gct ggc aca tcg gcg gtc   336
Ile Thr Leu Ala Leu Glu Thr Leu Cys Pro Ala Gly Thr Ser Ala Val
            100                 105                 110

acg ctg ctc aag atg ttc cta atg ctg cgc ttt cgt cag gat ctc tcc   384
Thr Leu Leu Lys Met Phe Leu Met Leu Arg Phe Arg Gln Asp Leu Ser
        115                 120                 125

att atg tgg aac cgc ctg agg ggc ctg ctc ttc gat ccc aac tgg gag   432
Ile Met Trp Asn Arg Leu Arg Gly Leu Leu Phe Asp Pro Asn Trp Glu
    130                 135                 140

cga ccc gag cag cgg gac atc cgg cta aag cac tcg gcc atg gcg gct   480
Arg Pro Glu Gln Arg Asp Ile Arg Leu Lys His Ser Ala Met Ala Ala
145                 150                 155                 160

cgc atc aat ttc tgg ccc ctg tca gcc gga ttc ttc aca tgc acc acc   528
Arg Ile Asn Phe Trp Pro Leu Ser Ala Gly Phe Phe Thr Cys Thr Thr
                165                 170                 175

tac aac cta aag ccg ata ctg atc gca atg ata ttg tat ctc cag aat   576
```

```
Tyr Asn Leu Lys Pro Ile Leu Ile Ala Met Ile Leu Tyr Leu Gln Asn
            180                 185                 190

cgt tac gag gac ttc gtt tgg ttt aca ccc ttc aat atg act atg ccc   624
Arg Tyr Glu Asp Phe Val Trp Phe Thr Pro Phe Asn Met Thr Met Pro
        195                 200                 205

aaa gtt ctg cta aac tat cca ttt ttt ccc ctg acc tac ata ttt att   672
Lys Val Leu Leu Asn Tyr Pro Phe Phe Pro Leu Thr Tyr Ile Phe Ile
    210                 215                 220

gcc tat acg ggc tat gtg acc atc ttt atg ttc ggc ggc tgt gat ggt   720
Ala Tyr Thr Gly Tyr Val Thr Ile Phe Met Phe Gly Gly Cys Asp Gly
225                 230                 235                 240

ttt tat ttc gag ttc tgt gcc cac cta tca gct ctt ttc gaa gtg ctc   768
Phe Tyr Phe Glu Phe Cys Ala His Leu Ser Ala Leu Phe Glu Val Leu
                245                 250                 255

cag gcg gag ata gaa tca atg ttt aga ccc tac act gat cac ttg gaa   816
Gln Ala Glu Ile Glu Ser Met Phe Arg Pro Tyr Thr Asp His Leu Glu
            260                 265                 270

ctg tcg cca gtg cag ctt tac att tta gag caa aag atg cga tca gta   864
Leu Ser Pro Val Gln Leu Tyr Ile Leu Glu Gln Lys Met Arg Ser Val
        275                 280                 285

atc att agg cac aat gcc atc atc gat ttg acc aga ttt ttt cgt gat   912
Ile Ile Arg His Asn Ala Ile Ile Asp Leu Thr Arg Phe Phe Arg Asp
    290                 295                 300

cgc tat acc att att acc ctg gcc cat ttt gtg tcc gcc gcc atg gtg   960
Arg Tyr Thr Ile Ile Thr Leu Ala His Phe Val Ser Ala Ala Met Val
305                 310                 315                 320

att gga ttc agc atg gtt aat ctc ctg aca ttg ggc aat aat ggt ctg   1008
Ile Gly Phe Ser Met Val Asn Leu Leu Thr Leu Gly Asn Asn Gly Leu
                325                 330                 335

ggc gca atg ctc tat gtg gcc tac acg gtt gcc gct ttg agc caa ctg   1056
Gly Ala Met Leu Tyr Val Ala Tyr Thr Val Ala Ala Leu Ser Gln Leu
            340                 345                 350

ctg gtt tat tgc tat ggc gga act ctg gtg gcc gaa agt agc act ggt   1104
Leu Val Tyr Cys Tyr Gly Gly Thr Leu Val Ala Glu Ser Ser Thr Gly
        355                 360                 365

ctg tgc cga gcc atg ttc tcc tgt ccg tgg cag ctt ttt aag cct aaa   1152
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```
Leu Cys Arg Ala Met Phe Ser Cys Pro Trp Gln Leu Phe Lys Pro Lys
    370                 375                 380

caa cgt cga ctc gtt cag ctt ttg att ctc aga tcg cag cgt cct gtt   1200
Gln Arg Arg Leu Val Gln Leu Leu Ile Leu Arg Ser Gln Arg Pro Val
385                 390                 395                 400

tcc atg gca gtg cca ttc ttt tcg cca tcg ttg gct acc ttt gct gcg   1248
Ser Met Ala Val Pro Phe Phe Ser Pro Ser Leu Ala Thr Phe Ala Ala
                405                 410                 415

att ctt caa act tcg ggt tcc ata att gcg ctg gtt aag tcc ttt cag   1296
Ile Leu Gln Thr Ser Gly Ser Ile Ile Ala Leu Val Lys Ser Phe Gln
            420                 425                 430


<210> 94
<211> 432
<212> PRT
<213> Drosophila melanogaster

<400> 94
Met Lys Val Gly Phe Ala Thr Ile Gly Tyr Ile Lys Ser Ile Pro Cys
  1               5                  10                  15

Gln Asp Val Val His Ile Val Ile Ser Ile Met Ser Glu Trp Leu Arg
             20                  25                  30

Phe Leu Lys Arg Asp Gln Gln Leu Asp Val Tyr Phe Phe Ala Val Pro
         35                  40                  45

Arg Leu Ser Leu Asp Ile Met Gly Tyr Trp Pro Gly Lys Thr Gly Asp
     50                  55                  60

Thr Trp Pro Trp Arg Ser Leu Ile His Phe Ala Ile Leu Ala Ile Gly
 65                  70                  75                  80

Val Ala Thr Glu Leu His Ala Gly Met Cys Phe Leu Asp Arg Gln Gln
                85                  90                  95

Ile Thr Leu Ala Leu Glu Thr Leu Cys Pro Ala Gly Thr Ser Ala Val
            100                 105                 110

Thr Leu Leu Lys Met Phe Leu Met Leu Arg Phe Arg Gln Asp Leu Ser
        115                 120                 125

Ile Met Trp Asn Arg Leu Arg Gly Leu Leu Phe Asp Pro Asn Trp Glu
    130                 135                 140
```

```
Arg Pro Glu Gln Arg Asp Ile Arg Leu Lys His Ser Ala Met Ala Ala
145                 150                 155                 160

Arg Ile Asn Phe Trp Pro Leu Ser Ala Gly Phe Phe Thr Cys Thr Thr
                165                 170                 175

Tyr Asn Leu Lys Pro Ile Leu Ile Ala Met Ile Leu Tyr Leu Gln Asn
            180                 185                 190

Arg Tyr Glu Asp Phe Val Trp Phe Thr Pro Phe Asn Met Thr Met Pro
        195                 200                 205

Lys Val Leu Leu Asn Tyr Pro Phe Phe Pro Leu Thr Tyr Ile Phe Ile
    210                 215                 220

Ala Tyr Thr Gly Tyr Val Thr Ile Phe Met Phe Gly Gly Cys Asp Gly
225                 230                 235                 240

Phe Tyr Phe Glu Phe Cys Ala His Leu Ser Ala Leu Phe Glu Val Leu
                245                 250                 255

Gln Ala Glu Ile Glu Ser Met Phe Arg Pro Tyr Thr Asp His Leu Glu
            260                 265                 270

Leu Ser Pro Val Gln Leu Tyr Ile Leu Glu Gln Lys Met Arg Ser Val
        275                 280                 285

Ile Ile Arg His Asn Ala Ile Ile Asp Leu Thr Arg Phe Phe Arg Asp
    290                 295                 300

Arg Tyr Thr Ile Ile Thr Leu Ala His Phe Val Ser Ala Ala Met Val
305                 310                 315                 320

Ile Gly Phe Ser Met Val Asn Leu Leu Thr Leu Gly Asn Asn Gly Leu
                325                 330                 335

Gly Ala Met Leu Tyr Val Ala Tyr Thr Val Ala Ala Leu Ser Gln Leu
            340                 345                 350

Leu Val Tyr Cys Tyr Gly Gly Thr Leu Val Ala Glu Ser Ser Thr Gly
        355                 360                 365

Leu Cys Arg Ala Met Phe Ser Cys Pro Trp Gln Leu Phe Lys Pro Lys
    370                 375                 380

Gln Arg Arg Leu Val Gln Leu Leu Ile Leu Arg Ser Gln Arg Pro Val
385                 390                 395                 400
```

```
Ser Met Ala Val Pro Phe Phe Ser Pro Ser Leu Ala Thr Phe Ala Ala
                405                 410                 415

Ile Leu Gln Thr Ser Gly Ser Ile Ile Ala Leu Val Lys Ser Phe Gln
            420                 425                 430
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<210> 95
<211> 1047
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1047)
<223> DORLU 27.1

<400> 95

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Met Ser Gly Cys Arg Ala Met Ala Leu Phe Thr Thr Thr Glu Glu Arg
  1               5                  10                  15

ctg ctg ccc tac cga tct aaa tgg cac acc ttg gta tat att caa atg   96
Leu Leu Pro Tyr Arg Ser Lys Trp His Thr Leu Val Tyr Ile Gln Met
            20                  25                  30

gtt ata ttt ttt gct tca atg agc ttt ggc tta acg gaa tcg atg gga   144
Val Ile Phe Phe Ala Ser Met Ser Phe Gly Leu Thr Glu Ser Met Gly
         35                  40                  45

gac cat gtt caa atg gga cgg gac tta gcc ttc atc ctt ggg aca tat   192
Asp His Val Gln Met Gly Arg Asp Leu Ala Phe Ile Leu Gly Thr Tyr
     50                  55                  60

tat ttc tgc tgg tat ggc gat gaa ctt gac caa gtg atc agc gat ctg   240
Tyr Phe Cys Trp Tyr Gly Asp Glu Leu Asp Gln Val Ile Ser Asp Leu
 65                  70                  75                  80

gac gct cta cat cct tgg gca cag aaa ggt cct aat cca gtt gaa tat   288
Asp Ala Leu His Pro Trp Ala Gln Lys Gly Pro Asn Pro Val Glu Tyr
                85                  90                  95

cag act ggt aaa cgt tgg tac ttc gta atg gct ttt ttc ttg gca acg   336
Gln Thr Gly Lys Arg Trp Tyr Phe Val Met Ala Phe Phe Leu Ala Thr
            100                 105                 110
```

```
tca tgg tcg ttc ttc ttg tgc att ttg cta ttg tta ctt ata acc tca   384
Ser Trp Ser Phe Phe Leu Cys Ile Leu Leu Leu Leu Leu Ile Thr Ser
        115                 120                 125

ccc atg tgg gtc cat cag caa aac ctt ccc ttt cat gcg gcg ttt cct   432
Pro Met Trp Val His Gln Gln Asn Leu Pro Phe His Ala Ala Phe Pro
    130                 135                 140

ttt caa tgg cac gaa aaa tcg ctt cat ccc atc agc cac gct ata atc   480
Phe Gln Trp His Glu Lys Ser Leu His Pro Ile Ser His Ala Ile Ile
145                 150                 155                 160

tat ctg ttt cag agc tat ttt gca gtg tat tgt ctg act tgg ctt ttg   528
Tyr Leu Phe Gln Ser Tyr Phe Ala Val Tyr Cys Leu Thr Trp Leu Leu
                165                 170                 175

tgc ata gag gga cta tca att tgt att tat gcg gaa att act ttc ggc   576
Cys Ile Glu Gly Leu Ser Ile Cys Ile Tyr Ala Glu Ile Thr Phe Gly
            180                 185                 190

att gaa gtt tta tgc cta gaa cta cgc caa att cac cga cac aat tat   624
Ile Glu Val Leu Cys Leu Glu Leu Arg Gln Ile His Arg His Asn Tyr
        195                 200                 205

ggc ctt caa gaa ctg aga atg gag acg aac cgc ttg gtc aag cta cat   672
Gly Leu Gln Glu Leu Arg Met Glu Thr Asn Arg Leu Val Lys Leu His
    210                 215                 220

cag aag att atg ggt gtt aac ttt tcc ttg gtg tcc ttg tcg gtt ttg   720
Gln Lys Ile Met Gly Val Asn Phe Ser Leu Val Ser Leu Ser Val Leu
225                 230                 235                 240

gag gcc gtg gag gct cgg aag gac ccc aaa gtt gtg gcc cag ttt gca   768
Glu Ala Val Glu Ala Arg Lys Asp Pro Lys Val Val Ala Gln Phe Ala
                245                 250                 255

gtc ctt atg ttg ctc gcc tta gga cat cta tct atg tgg tcg tat tgt   816
Val Leu Met Leu Leu Ala Leu Gly His Leu Ser Met Trp Ser Tyr Cys
            260                 265                 270

gga gac cag tta tcc cag aag tca ttg caa att tcg gag gct gcc tat   864
Gly Asp Gln Leu Ser Gln Lys Ser Leu Gln Ile Ser Glu Ala Ala Tyr
        275                 280                 285

gag gct tac gac cca acc aaa gga tca aag gat gtg tat aga gac ctc   912
Glu Ala Tyr Asp Pro Thr Lys Gly Ser Lys Asp Val Tyr Arg Asp Leu
    290                 295                 300
```

```
tgc gta ata atc agg cgt ggc cag gac cct ttg atc atg aga gcc agc   960
Cys Val Ile Ile Arg Arg Gly Gln Asp Pro Leu Ile Met Arg Ala Ser
305                 310                 315                 320

cca ttt ccg tcc ttt aat tta ata aac tac agc gct ata ctt aac caa   1008
Pro Phe Pro Ser Phe Asn Leu Ile Asn Tyr Ser Ala Ile Leu Asn Gln
                325                 330                 335

tgt tat gga atc ctg aca ttt ttg cta aag aca tta gac               1047
Cys Tyr Gly Ile Leu Thr Phe Leu Leu Lys Thr Leu Asp
            340                 345
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<210> 96
<211> 349
<212> PRT
<213> Drosophila melanogaster

<400> 96

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Met Ser Gly Cys Arg Ala Met Ala Leu Phe Thr Thr Thr Glu Glu Arg
  1               5                  10                  15

Leu Leu Pro Tyr Arg Ser Lys Trp His Thr Leu Val Tyr Ile Gln Met
             20                  25                  30

Val Ile Phe Phe Ala Ser Met Ser Phe Gly Leu Thr Glu Ser Met Gly
         35                  40                  45

Asp His Val Gln Met Gly Arg Asp Leu Ala Phe Ile Leu Gly Thr Tyr
     50                  55                  60

Tyr Phe Cys Trp Tyr Gly Asp Glu Leu Asp Gln Val Ile Ser Asp Leu
 65                  70                  75                  80

Asp Ala Leu His Pro Trp Ala Gln Lys Gly Pro Asn Pro Val Glu Tyr
                 85                  90                  95

Gln Thr Gly Lys Arg Trp Tyr Phe Val Met Ala Phe Phe Leu Ala Thr
            100                 105                 110

Ser Trp Ser Phe Phe Leu Cys Ile Leu Leu Leu Leu Leu Ile Thr Ser
        115                 120                 125

Pro Met Trp Val His Gln Gln Asn Leu Pro Phe His Ala Ala Phe Pro
    130                 135                 140

Phe Gln Trp His Glu Lys Ser Leu His Pro Ile Ser His Ala Ile Ile
145                 150                 155                 160
```

```
Tyr Leu Phe Gln Ser Tyr Phe Ala Val Tyr Cys Leu Thr Trp Leu Leu
                165                 170                 175

Cys Ile Glu Gly Leu Ser Ile Cys Ile Tyr Ala Glu Ile Thr Phe Gly
            180                 185                 190

Ile Glu Val Leu Cys Leu Glu Leu Arg Gln Ile His Arg His Asn Tyr
        195                 200                 205

Gly Leu Gln Glu Leu Arg Met Glu Thr Asn Arg Leu Val Lys Leu His
    210                 215                 220

Gln Lys Ile Met Gly Val Asn Phe Ser Leu Val Ser Leu Ser Val Leu
225                 230                 235                 240

Glu Ala Val Glu Ala Arg Lys Asp Pro Lys Val Val Ala Gln Phe Ala
                245                 250                 255

Val Leu Met Leu Leu Ala Leu Gly His Leu Ser Met Trp Ser Tyr Cys
            260                 265                 270

Gly Asp Gln Leu Ser Gln Lys Ser Leu Gln Ile Ser Glu Ala Ala Tyr
        275                 280                 285

Glu Ala Tyr Asp Pro Thr Lys Gly Ser Lys Asp Val Tyr Arg Asp Leu
    290                 295                 300

Cys Val Ile Ile Arg Arg Gly Gln Asp Pro Leu Ile Met Arg Ala Ser
305                 310                 315                 320

Pro Phe Pro Ser Phe Asn Leu Ile Asn Tyr Ser Ala Ile Leu Asn Gln
                325                 330                 335

Cys Tyr Gly Ile Leu Thr Phe Leu Leu Lys Thr Leu Asp
            340                 345
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<210> 97
<211> 1185
<212> DNA
<213> Drosophila melanogaster

<220>
<221> CDS
<222> (1)..(1185)
<223> DORLU 28.1

<400> 97

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atg gaa ttg aaa tcg atg gat ccg gtg gag atg ccc att ttt ggt agc   48
Met Glu Leu Lys Ser Met Asp Pro Val Glu Met Pro Ile Phe Gly Ser
  1               5                  10                  15

act ctg aag cta atg aag ttc tgg tca tat ctg ttt gtt cac aac tgg   96
Thr Leu Lys Leu Met Lys Phe Trp Ser Tyr Leu Phe Val His Asn Trp
             20                  25                  30

cgc cgc tat gtc gca atg act ccg tac atc att atc aac tgt act cag   144
Arg Arg Tyr Val Ala Met Thr Pro Tyr Ile Ile Ile Asn Cys Thr Gln
         35                  40                  45

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Tyr Val Asp Ile Tyr Leu Ser Thr Glu Ser Leu Asp Phe Ile Ile Arg
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aat gta tac ctg gct gta ttg ttt acc aac acg gtg gtc aga ggt gta   240
Asn Val Tyr Leu Ala Val Leu Phe Thr Asn Thr Val Val Arg Gly Val
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ttg tta tgc gta cag cgg ttt agc tac gag cgt ttc att aat att ttg   288
Leu Leu Cys Val Gln Arg Phe Ser Tyr Glu Arg Phe Ile Asn Ile Leu
                 85                  90                  95

aaa agc ttt tac att gag ttg ttg caa tca gat gac ccc atc ata aac   336
Lys Ser Phe Tyr Ile Glu Leu Leu Gln Ser Asp Asp Pro Ile Ile Asn
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att ttg gtc aag gaa acc aca cgc cta tca gtt tta att agt agg att   384
Ile Leu Val Lys Glu Thr Thr Arg Leu Ser Val Leu Ile Ser Arg Ile
        115                 120                 125

aat tta tta atg ggc tgc tgc act tgc att ggc ttt gtt aca tat ccc   432
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att ttt ggt tcg gaa aga gtt ctg cca tat ggc atg tat ttg ccc act   480
Ile Phe Gly Ser Glu Arg Val Leu Pro Tyr Gly Met Tyr Leu Pro Thr
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att gat gaa tac aaa tac gca tca cct tac tac gag att ttc ttt gtg   528
Ile Asp Glu Tyr Lys Tyr Ala Ser Pro Tyr Tyr Glu Ile Phe Phe Val
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att caa gcc att atg gct cca atg ggg tgt tgc atg tac ata cca tac   576
Ile Gln Ala Ile Met Ala Pro Met Gly Cys Cys Met Tyr Ile Pro Tyr
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        195                 200                 205

gtg ttg caa cat aag ttg aga agc cta gaa aag ctg aaa aat gaa caa   672
Val Leu Gln His Lys Leu Arg Ser Leu Glu Lys Leu Lys Asn Glu Gln
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gta cgt ggt gaa atc ata tgg tgc ata aaa tat caa tta aaa tta tca   720
Val Arg Gly Glu Ile Ile Trp Cys Ile Lys Tyr Gln Leu Lys Leu Ser
225                 230                 235                 240

gga ttt gtt gat tca atg aat gcc ttg aac acc cat ctt cat ttg gtg   768
Gly Phe Val Asp Ser Met Asn Ala Leu Asn Thr His Leu His Leu Val
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gag ttc ctt tgc ttt ggt gcc atg cta tgt gtt ctt ctt ttc tcc tta   816
Glu Phe Leu Cys Phe Gly Ala Met Leu Cys Val Leu Leu Phe Ser Leu
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ata att gct caa aca att gct cag acc gtc ata gtc atc gca tac atg   864
Ile Ile Ala Gln Thr Ile Ala Gln Thr Val Ile Val Ile Ala Tyr Met
        275                 280                 285

gta atg ata ttt gcc aac agt gta gtc ctt tac tac gtg gcc aat gag   912
Val Met Ile Phe Ala Asn Ser Val Val Leu Tyr Tyr Val Ala Asn Glu
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cta tac ttt caa gta aga gtt gtc caa ttt tct ttt aaa ttt ttg tat   960
Leu Tyr Phe Gln Val Arg Val Val Gln Phe Ser Phe Lys Phe Leu Tyr
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aag tat ggg att ttg cag agc ttt gat att gcc att gct gcc tat gag   1008
Lys Tyr Gly Ile Leu Gln Ser Phe Asp Ile Ala Ile Ala Ala Tyr Glu
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agc aat tgg atg gac ttt gat gtg gac aca caa aag act ttg aag ttc   1056
Ser Asn Trp Met Asp Phe Asp Val Asp Thr Gln Lys Thr Leu Lys Phe
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ctc atc atg cgc tcg caa aag ccc ttg gcg act ctg gtg ggt ggc aca   1104
Leu Ile Met Arg Ser Gln Lys Pro Leu Ala Thr Leu Val Gly Gly Thr
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Asn Val Tyr Leu Ala Val Leu Phe Thr Asn Thr Val Val Arg Gly Val
 65                  70                  75                  80

Leu Leu Cys Val Gln Arg Phe Ser Tyr Glu Arg Phe Ile Asn Ile Leu
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Lys Ser Phe Tyr Ile Glu Leu Leu Gln Ser Asp Asp Pro Ile Ile Asn
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Ile Leu Val Lys Glu Thr Thr Arg Leu Ser Val Leu Ile Ser Arg Ile
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Asn Leu Leu Met Gly Cys Cys Thr Cys Ile Gly Phe Val Thr Tyr Pro
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145                 150                 155                 160

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Gly Phe Val Asp Ser Met Asn Ala Leu Asn Thr His Leu His Leu Val
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Glu Phe Leu Cys Phe Gly Ala Met Leu Cys Val Leu Leu Phe Ser Leu
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Ile Ile Ala Gln Thr Ile Ala Gln Thr Val Ile Val Ile Ala Tyr Met
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Val Met Ile Phe Ala Asn Ser Val Val Leu Tyr Tyr Val Ala Asn Glu
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Leu Tyr Phe Gln Val Arg Val Val Gln Phe Ser Phe Lys Phe Leu Tyr
305                 310                 315                 320

Lys Tyr Gly Ile Leu Gln Ser Phe Asp Ile Ala Ile Ala Ala Tyr Glu
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Ser Asn Trp Met Asp Phe Asp Val Asp Thr Gln Lys Thr Leu Lys Phe
            340                 345                 350

Leu Ile Met Arg Ser Gln Lys Pro Leu Ala Thr Leu Val Gly Gly Thr
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<220>
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<222> (1)..(121)

<220>
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<212> DNA
<213> Drosophila melanogaster

<220>
<223> DOR 33B.2, region of BDGP Clone No. AC006240

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<222> (1)..(121)

<220>
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<222> (849)..(1030)

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ttggcatctt ttgggcctgg aaagcaattt ctttctgaat cgcttgttgg atttggtgat 240
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<212> DNA
<213> Drosophila melanogaster

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<222> (1)..(120)

<220>
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<222> (852)..(930)

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<210> 108
<211> 1426
<212> DNA
<213> Drosophila melanogaster

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<223> DOR 46F.1, region of BDGP Clone No. AC005974

<220>
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<222> (1)..(120)

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<222> (949)..(1040)

<220>
<221> intron
<222> (1130)..(1185)

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<210> 109
<211> 1337
<212> DNA
<213> Drosophila melanogaster

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<220>
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<222> (1)..(121)

<220>
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<222> (1223)..(1283)

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<210> 110
<211> 1466
<212> DNA
<213> Drosophila melanogaster

<220>
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<222> (1)..(121)

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<222> (423)..(478)

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<222> (669)..(728)

<220>
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<222> (1345)..(1415)

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<211> 1724
<212> DNA
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<220>
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<220>
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<222> (491)..(552)

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<222> (1071)..(1119)

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<222> (1328)..(1456)

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<222> (1616)..(1673)

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